October 2015

THE WORK FOUNDATION
PART OF LANCASTER UNIVERSITY

The Creative Economy in Lancashire

Current, and future, employment and skill challenges

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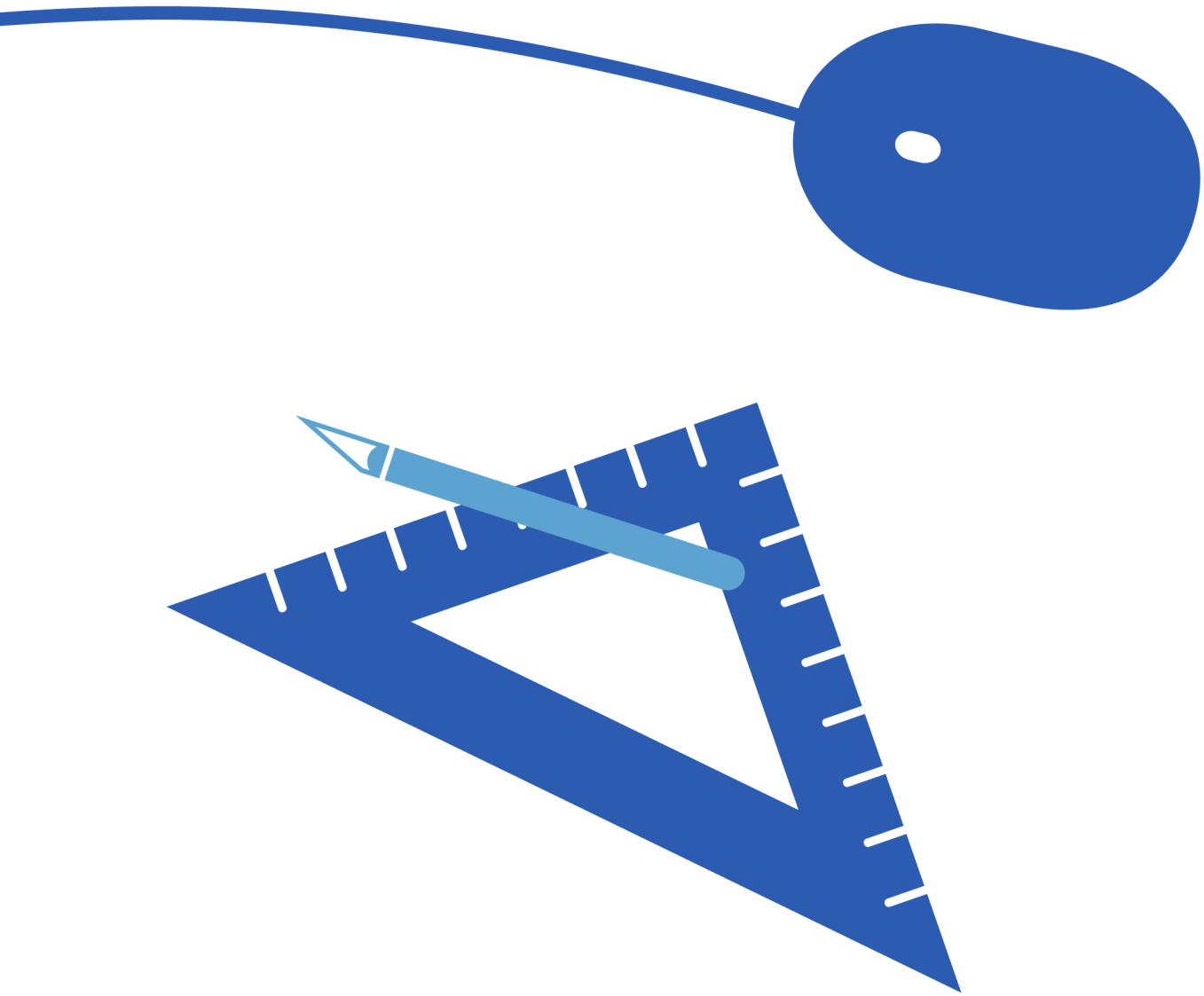

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Executive summary

Introduction

Context

The UK's Creative Economy has expanded rapidly in recent years driven primarily by rapid technological advances and the digitisation of the wider economy. The latest government estimates (June 2015) show that in 2014, 2.8 million people were employed in the Creative Economy in UK. This figure represented an increase of 14 per cent since 2011, a much faster rate of growth than that seen in the economy as a whole. This means that the Creative Economy now accounts for around 1 in 11 of all UK jobs.

The extent and pace of change is leading to recruitment challenges and skills gaps amongst the existing workforce. Employers are increasingly seeking individuals who possess a fusion of technological, business, creative and interpersonal skills and there are concerns about the ability of the education sector to generate sufficient quality and quantity of graduates, in particular those with digital skills, to fulfil future demand.

Aims of the Study

In late 2014, The Work Foundation was commissioned to undertake mapping and analysis of the creative and digital economies and their current and future skills needs across Lancashire, Blackpool, and Blackburn. The aims of the study were:

- To provide an overview of the Creative Economy, current employment and skills issues for employers and skills providers and future skills challenges for the sector as a whole in the UK.
- To draw together available evidence on the size and makeup of Creative Economy employment and businesses in Lancashire, together with higher and further education student numbers.
- To explore evidence from businesses and stakeholders of the key issues for consideration by employer and skills providers.

Approach

Our approach to the study was influenced by the fact that there is an underlying challenge in terms of defining the elements that make up the Creative Economy.

Our definition follows the official Department of Culture, Media and Sport's (DCMS) definition

which is built from the standard industrial and occupational classifications used by the Office for National Statistics (ONS) and is structured in terms of:

- **Creative Industries** – The contribution of those employed in industries such as: Advertising; Architecture; Crafts; Design; Film & TV, etc.; IT and computing; Publishing; Museums & galleries, etc.; Music & arts, etc. These may be employed in any occupation within those industries.

- **Creative Economy** – The contribution of those employed in Creative Industries, plus those that are employed in creative occupations outside of the Creative Industries. This includes, for example, those working in occupations such as public relations professionals and architects, or furniture makers and knitters, across all industrial activities.

To deepen our knowledge of the demand and supply of skills for Lancashire's Creative Economy, three separate but complementary engagement initiatives were undertaken with business, wider stakeholders and with skills providers. These were supported by Creative Lancashire and are summarised below.

a) Business Consultation:

Businesses in the Lancashire Creative Economy were engaged in the study through two routes:

First, twenty in-depth interviews were held with owners or managers of creative businesses using a framework of semi-structured interviews. Businesses covered a spectrum from purely creative to digital firms. Most have a fusion of digital and creative skills applied to the business. The businesses in the sample were larger and more mature than is the average for the sector, driven by a wish to better understand the capability and barriers to growth.

Second, an interactive workshop with 13 business attendees was held. The workshop presented the initial data from the study and sought to confirm findings and identify potential opportunities to address skills barriers.

b) Stakeholder Consultation:

Eight in-depth interviews were undertaken with stakeholders in local government / local institutions that have a key role in supporting the area's Creative Economy. These interviews were undertaken to validate findings from the business interviews and to provide specific insights into the support currently available. The interviews were semi-structured around four main themes, including skills.

c) Skills Providers Consultation:

Finally a workshop with representatives from a comprehensive group of Lancashire skills providers was held. The workshop addressed specific questions regarding current engagement with business; how this could be improved; and, whether there were key examples of good practice that could be identified, shared and developed further.

Our recommendations and action plans were drawn up through an analysis of both the quantitative evidence from available statistics and from each of the consultation exercises.

State of the Sector

From our review of statistics, we estimate that the total employment in the 'Creative Economy' in Lancashire is above 36,000 jobs. We emphasise that this includes jobs within Creative Industries and jobs in creative occupations across other industries. The ONS Annual Population Survey is the only employment survey that provides both industrial and occupational data.

Table 0.1 Estimates of total employment in the Creative Economy in Lancashire and the UK

	Creative Industries	Creative occupations in other industries	Creative Economy	Creative Economy, share of jobs
Lancashire	22,400	14,100	36,500	5.7%
UK	1,599,100	926,700	2,525,700	8.6%

Source: ONS Annual Population Survey, 2011-2014

The data indicates that within Lancashire, there are over 22,000 jobs in Creative Industries. Across other sectors, there are a further 14,000 jobs in creative occupations. The estimated share of this Creative Economy is 5.7 per cent of total employment in Lancashire. This is less than the share for the UK overall which stands at 8.6 per cent.

Estimates based on the Annual Population present sample size and survey method challenges. However, triangulating these estimates with other sources leads us to conclude that a figure of over 30,000 jobs is a defensible estimate.

Estimating Gross Value Added (GVA) of the Creative Economy in Lancashire presents a similarly significant difficulty as there is limited published data to draw from. Using a range of figures we estimate a value of around £800 million for Lancashire's Creative Industries and if we assume that people in creative occupations share the same productivity as those within Creative Industries we estimate a figure of almost £1.3 billion in total.

The composition of employment in Lancashire's Creative Industries is concentrated in IT, software and computer services. Jobs in film, TV, video, radio and photography are less well

represented than the national average, potentially because of the competitive position of Greater Manchester.

Table 0.2 Employment by sub-sector and share of Creative Industry

Creative Industries sub-sectors	Lancashire	Great Britain
Advertising and marketing	13%	13%
Architecture	8%	6%
Design: product, graphic and fashion	6%	4%
Film, TV, video, radio and photography	7%	12%
IT, software and computer services	41%	39%
Museums, galleries and libraries	8%	5%
Music, performing and visual arts	10%	9%
Publishing	9%	12%

Source: ONS Annual Population Survey, 2009-2014

From an analysis of Dun and Bradstreet UK, the sector in Lancashire includes some 4,500 companies and once more shows the pre-dominance of IT, software and computer services. Analysis of recent trends from the ONS Business Register and Employment Survey indicates a reduction in the number of jobs by 5 per cent between 2009 and 2013. This is a modest fall of 600 jobs, but compares to a national rise of 10 per cent in Creative Industries. Within Lancashire's Creative Industries, the falls were concentrated in publishing and advertising and marketing. These were partially offset by rises in design and visual arts.

Table 0.3 Enterprises by sub-sector in Lancashire's Creative Industries

Creative Industries sub-sectors	Number	% Share
Advertising and marketing	360	8%
Architecture	310	7%
Design: product, graphic and fashion	230	5%
Film, TV, video, radio and photography	710	16%
IT, software and computer services	1,980	43%
Museums, galleries and libraries	200	4%
Music, performing and visual arts	400	9%
Publishing	320	7%

Source: D&B UK (2014)

Most of these enterprises in Lancashire's Creative Industries have only a few employees. Almost 90 per cent are micro businesses with fewer than ten employees, and these account for around half of all Creative Industry jobs. But there are also large businesses with over 250 employees. These few firms account for up to 14 per cent of Creative Industry jobs in the area.

Table 0.4 Lancashire's Creative Industry businesses by size band

Business size	Number of employees	Business units
No employees	0	400
Micro	1-9	4,000
Small	10-49	160
Medium	49-250	40
Large	250+	6
Total		**4,600**

Source: D&B UK (2014)

There are variations in the concentration of activity in Creative Industries across Lancashire's local authority areas. Preston, Chorley, and Blackburn with Darwen are the local authorities with the greatest number of employees in these industries, being home to over 40 per cent.

The distributed geography but with distinct urban clusters of creative businesses offers both a challenge and an opportunity for Lancashire. Clusters thrive on proximity and the additionality that arises from cross-fertilisation of knowledge, information and ideas. This unique geography needs to be recognised in any actions taken to address both skills demand and supply.

Skills Provision

Creative and digital starts in Lancashire are concentrated at NVQ Level 2 and below (equivalent to GSCE level) making up around 62 per cent of total starts in creative and digital subjects. At these levels, in 2014/15, some 52 per cent were studying ICT, however, as might be expected, almost all were studying as practitioners and users (99.6 per cent) with 30 per cent studying Crafts, Creative Arts and Design.

Delivery was concentrated in the sub-sectors of crafts, creative arts and design (11,840 starts) and ICT for Users (13,000 starts). Most starts were made by those aged over 25 (62 per cent of the total).

Table 0.5 Delivery starts by level 2013/14

	Under 16	16-18	19-24	25+	Total
Entry level	44	133	525	2,676	**3,378**
Higher level	0	0	0	0	**0**
Level 1	19	1,124	1,745	4,389	**7,277**
Level 2	31	1,047	777	2,589	**4,444**
Level 3	1	7,573	388	390	**8,352**
Level 4 (original)	0	247	467	226	**940**
Not applicable	3	8	540	13,469	**14,020**
Grand Total	**98**	**10,132**	**4,442**	**23,739**	**38,411**

Source: LEP Data Cube

Table 0.6 Delivery starts by sub-sector 2013/14

	Under 16	16-18	19-24	25+	Total
Information and Communication Technology	**31**	**3,447**	**2,607**	**13,356**	**19,441**
Information and Communication Technology	3	2	11	61	**77**
ICT Practitioners	0	2,452	1,384	2,522	**6,358**
ICT for Users	28	993	1,212	10,773	**13,006**
Arts, Media and Publishing	**67**	**6,685**	**1,835**	**10,383**	**18,970**
Arts, Media and Publishing	0	3	21	141	**165**
Performing Arts	37	1,989	324	1,510	**3,860**
Crafts, Creative Arts and Design	27	2,840	1,224	7,753	**11,844**
Media and Communication	3	1,828	209	513	**2,553**
Publishing and Information Services	0	25	57	466	**548**
Grand Total	**98**	**10,132**	**4,442**	**23,739**	**38,411**

Source: LEP Data Cube

The majority of higher level skills in Creative and Digital sectors are delivered through Higher Education. Locally in Lancashire, University students are predominantly studying Creative Arts and Design. Over 40 per cent of students are classed as studying Creative Arts and

Design compared to less than 20 per cent in computer science.

For computer sciences the Lancashire provision is 7 per cent below the national average and taking into account the wider North West, it is some 5.5 per cent below the national level.

Given that the demand from local employers and the Creative Economy as a whole in the UK lies predominantly in the need for an increase in a range of digital skills, this presents a particular local challenge of potential skills recruitment, and the retention of locally developed creative talent.

Table 0.7 Creative Economy HE students in Lancashire by University, 2013/14

Broad code	The University of Central Lancashire	Edge Hill Uni	Lancaster University	Total	% Provision
Computer Sciences	575	430	490	**1,495**	16.90%
Engineering & technology*	5	0	0	**5**	0.05%
Architecture, building & planning**	790	0	0	**790**	8.91%
Marketing	195	195	545	**935**	10.54%
Mass communication & documentation	940	495	155	**1,590**	17.93%
Creative arts & design	2,700	960	390	**4,050**	45.68%
Total	**5,205**	**2,080**	**1,580**	**8,865**	

* Only includes course related to – ceramics & glasses (J300), polymers & textiles (J400), and materials technology nec (J500)
** Does not include planning
Source: HESA

Critical Issues

Recruiting people who have appropriate digital skills was identified as being the principal problem, rather than sourcing people who have creative skills. There were felt to be different issues for digital companies as opposed to (creative) agencies. **Skills gaps** are more prevalent in the digital sub-sector than in the workforce as a whole, with 7 per cent of employees not fully proficient in their role (compared to 5 per cent in the economy as whole) at the UK level.

This demonstrates a potential mismatch in terms of the scale and nature of provision which

shows a significantly greater proportion of students studying to obtain “Creative Arts” rather than “Digital” skills (over 40 per cent compared to less than 20per cent) at all levels. Within the 20 per cent, it is also noted that the predominant provision is geared towards ICT practitioners and users rather than technical ICT training.

There are **recruitment challenges** within the digital sub-sector which has a much higher incidence of skills shortage vacancies[1] – the skills reported as hard to obtain by employers were advanced IT or software skills of a technical nature such as cyber skills or PHP programming.

There is a high demand for graduate labour amongst Creative Economy employers. The sector itself is highly skilled with more than half (59 per cent) of jobs filled by those with degree level and above qualifications, compared to less than an third of jobs (32 per cent) in the economy as a whole.[2] Local retention will be important in this context.

The sector is less diverse than the economy as a whole which is restricting the supply of labour. For example, women are under-represented in Creative Economy jobs – 36 per cent of jobs are filled by women compared to 47 per cent of all UK jobs.[3] Diversity issues of all types are particularly acute in the digitally focused businesses.

There are concerns about the ability of the education system to supply the quantity and quality of workers needed to meet the demand for the digital sector. In particular, employers have concerns with the ability of higher education institutions to keep pace with technological changes or provide students with sufficient practical experience.[4]

Skills providers all highlighted significant challenges which make it difficult to engage with businesses in the sector to support their skills needs or access placements for students:

- **Business size** – the concentration of small micro businesses and freelancers within the sector makes addressing skills needs challenging and limits the ability to effectively engage with many businesses.

- **Employees learn by doing** across the sector rather than by traditional learning approaches.

- **Dynamic nature of the sector** – the skills needs to the sector are rapidly changing, so much so that *“qualifications are out of date almost as soon as they have been developed”*.

[1] Skills shortage vacancies arise when a vacancy is hard to fill because applicants lack the skills, experience or qualifications that the company seeks.
[2] DCMS (June 2015). *Creative Industries: Focus on Employment*
[3] DCMS (June 2015). *Creative Industries: Focus on Employment*
[4] See for instance UKCES 2012 or NESTA 2013

- **There has been limited engagement with apprenticeships** and numbers of advanced apprenticeships remain very low.

- **Lack of flexible funding** – business need is often for short, flexible skills support rather than qualifications, which does not fit traditional skills provision models.

Taking these broad issues together we can summarise the key areas for action as follows:

1. Strengthening the local digital-skills pipeline from schools to HEIs.

2. Gearing skills enhancement to be appropriate for the dynamic and micro-based businesses in Lancashire Creative Industries.

3. Improving recruitment and retention through addressing the challenges and opportunities of the positioning of Lancashire.

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Figures and tables

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1. Introduction

Lancashire County Council recognises the role that creativity and innovation play in the economy and established the Creative Lancashire team dedicated to the sector. Creative Lancashire aims to strengthen existing businesses, support new enterprises, and raise the competitiveness and profile of the creative and digital sector in Lancashire.

In late 2014, Creative Lancashire commissioned The Work Foundation to work alongside them in mapping the Creative Economy across Lancashire, Blackpool, and Blackburn. The mapping exercise is structured around three key aims:

1. *Provide an up-to-date picture of the Lancashire Creative Economy.*

2. *Provide strategic priorities and actions for future development of the Creative Economy.*

3. *Identify opportunities to develop growth, resilience, and sustainability in the Creative Economy.*

This report forms one of the outputs from this study and draws together evidence related to skills and employment challenges facing the sector, and will be used to support further dialogues with businesses and skills providers.

The rest of the report is structured as follows:

- **Chapter 2** – provides an overview of the UK's Creative Economy, current employment and skills issues for employers and skills providers and future skills challenges for the sector.

- **Chapter 3** – draws together available evidence on the size and makeup of Creative Economy employment and businesses in Lancashire, Creative Economy higher and further education student numbers.

- **Chapter 4** – sets out evidence from businesses and stakeholder discussions and of the key issues for consideration by employer and skills providers.

- **Chapter 5** – sets out the key issues for action arising from both the overview of the Creative Economy statistics and our consultation with business; skills providers and other stakeholders.

- **Chapter 6** – lays out an Action Plan for the Lancashire County Council Skills and Employment Board.

2. The Creative Economy – review of literature

The UK's Creative Economy has expanded rapidly in recent years driven primarily by rapid technological advances and the digitisation of the wider economy.

The digital environment is fundamentally driving, and changing, the business models of Creative Industries. There is rapid movement to a world where creative content is conceived, published, distributed, advertised and consumed digitally. However, the extent and pace of change is leading to recruitment challenges and skills gaps amongst the existing workforce. Employers are increasingly seeking individuals who possess a fusion of technology, business, creative and interpersonal skills. Yet, there are concerns about the ability of the education sector to generate sufficient quality and quantity of graduates, in particular those with digital skills, to fulfil the future demand of the sector.

2.1 Challenge of defining the Creative Economy

The concepts of 'Creative Industries' and the 'Creative Economy' have been of policy interest for many years – reflecting the view that 'creative' activities and occupations, from advertising and theatres, through to computer programming and book publishing, are an essential part of a modern economy.

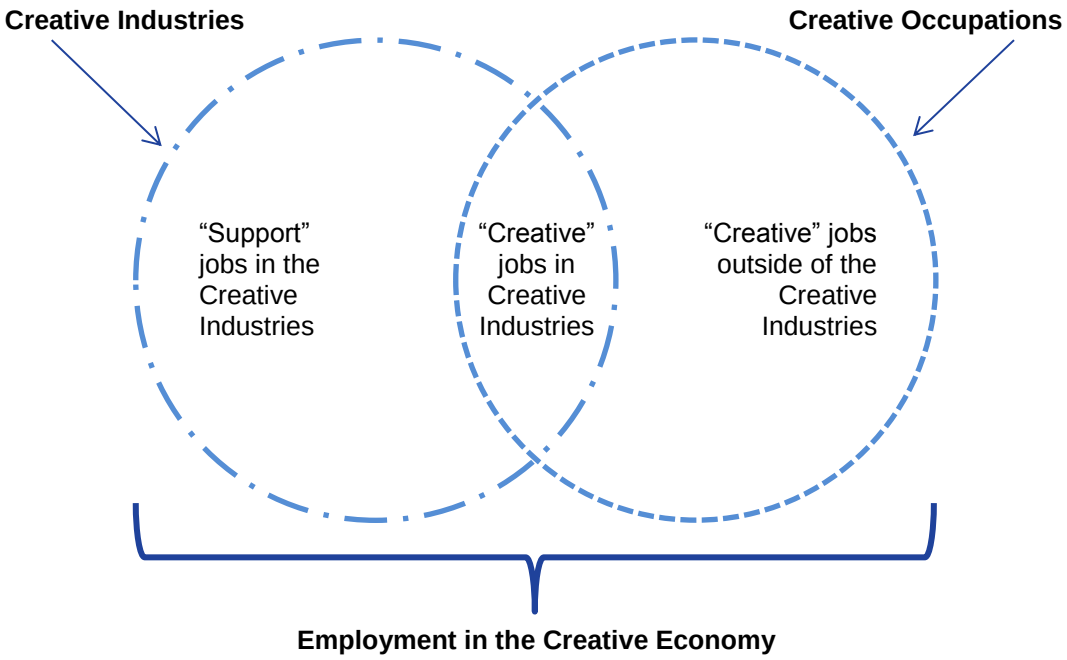
The Department for Culture, Media and Sport (DCMS) has developed an official national release of "Creative Industries Economic Estimates (2014)". This is built from the standard industrial and occupational classifications used by the Office of National Statistics (ONS) and structured in terms of:

- **Creative Industries** – The contribution of those employed in industries such as: Advertising; Architecture; Crafts; Design; Film & TV, etc.; IT and computing; Publishing; Museums & galleries, etc.; Music & arts, etc. These may be employed in any occupation within those industries.

- **Creative Economy** – The contribution of those employed in Creative Industries, plus those that are employed in creative occupations outside of the Creative Industries. This includes, for example, those working in occupations such as public relations professionals and architects, to furniture makers and knitters, across all industrial activities.

The standard industrial and occupational classifications that we have used are presented in Annex A. The 'Creative Economy' combining both industries and occupations is illustrated in Figure 2.1 below.

Figure 2.1 Describing the Creative Economy



2.2 The Creative Economy in the UK

The latest government estimates (June 2015) show that in 2014, 2.8 million people were employed in the Creative Economy in UK. This figure represented an increase of 14 per cent since 2011, a much faster rate of growth than that seen in the economy as a whole. This means that the Creative Economy now accounts for around 1 in 11 of all UK jobs.

The largest sub-sectors in employment terms are: advertising and marketing, IT software and computer services and music and the performing arts as shown in Table 2.1 below. All sub-sectors, with the exception of publishing, crafts and museums, galleries and libraries, have experienced increases in employment:

- IT, software and computer services saw the greatest absolute increase in employment (+160,000 jobs or +22.6 per cent) driven by rapid technological advances and the continued digitisation of the wider economy.

- There was strong growth in music, performing and visual arts (+71,000 or +25.8 per cent) reflecting the continued growth of the 'experience economy' and the UK's strength as the fourth largest producer of music in world.[5]

- Employment in the design sub-sector grew by a third (+51,000 jobs or +33.6 per

[5] Create UK (2014) Creative industries Strategy

cent). The UK has the second largest design sector in the world and design accounted for £131 million of services exported in 2011.[6]

Table 2.1 Creative Economy jobs by sub-sector, 2014

Creative Economy group	2011	2014	% Change 2011-14
Advertising and marketing	470,000	499,000	6.2
Architecture	121,000	143,000	17.4
Crafts	105,000	95,000	-9.8
Design: product, graphic and fashion design	153,000	204,000	33.6
Film, TV, video, radio and photography	233,000	264,000	13.2
IT, software and computer services	711,000	871,000	22.6
Museums, galleries and libraries	113,000	106,000	-6.6
Music, performing and visual arts	276,000	347,000	25.8
Publishing	239,000	225,000	-6.1
Total Creative Economy	**2,422,000**	**2,754,000**	**13.7**

Source: DCMS June 2015 (https://www.gov.uk/government/statistics/creative-industries-2015-focus-on)

Creative Economy jobs are concentrated in London and the South East – which together host 45 per cent of all UK Creative Economy jobs. However, growth in the number of jobs over the last four years has been fastest in the West Midlands (23.3 per cent), the North East (22.3 per cent), the East Midlands (21.9 per cent) and the South West (22.5 per cent).

Table 2.2 Employment in the Creative Economy, by region and devolved administrations

	2011	2014	% Change 2011-14
England	**2,127,000**	**2,436,000**	**14.5**
North East	*51,000*	*62,000*	*22.3*
North West	*198,000*	*220,000*	*11.2*
Yorkshire & The Humber	*138,000*	*151,000*	*9.5*
East Midlands	*123,000*	*150,000*	*21.9*
West Midlands	*145,000*	*179,000*	*23.2*

[6] Create UK (2014) Creative industries Strategy

East of England	*190,000*	*213,000*	*11.7*
London	*689,000*	*796,000*	*15.4*
South East	*405,000*	*435,000*	*7.5*
South West	*187,000*	*230,000*	*22.5*
Wales	**76,000**	**80,000**	**5.4**
Scotland	**164,000**	**174,000**	**6.3**
Northern Ireland	**43,000**	**44,000**	**3.8**
UK	**2,422,000**	**2,754,000**	**13.7**

Source: DCMS June 2015 (https://www.gov.uk/government/statistics/creative-industries-2015-focus-on)

2.3 Issues for employers

The rapid expansion of the sector, alongside the extent and pace of technological change, is leading to recruitment challenges and skills gaps amongst the existing workforce. The UK Commission's Employer Skills Survey (2014) reported that:

- **Skills gaps** are more prevalent in the digital sub-sector than in the workforce as a whole, with 7 per cent of employees not fully proficient in their role (compared to 5 per cent in the economy as whole). When asked about the skills that needed improving, unsurprisingly, digital and creative firms were more likely to identify advanced IT or software skills compared to the economy as a whole.[7] Digital employers were also much more likely to highlight problems with technical, practical or job-specific skills.[8]

- There are **recruitment challenges** within the digital sub-sector which has a much higher incidence of skills shortage vacancies[9] – the skills reported as hard to obtain by employers were advanced IT or software skills. UKCES (2015) notes that employers find it challenging to recruit candidates in high-value digital skills areas such as cyber security and business analysts, and in technical roles such as programmers and web developers.

- The survey also found that skills gaps and skills shortages are having a negative impact on creative and digitals businesses with employers having to delay the introduction of new products and services.

[7] 37 per cent of digital and creative employers highlighted advanced IT or software skills, compared to 24 per cent across the economy as a whole.
[8] 72 per cent of digital employers highlighted technical, practical or job-specific skills, compared to 60 per cent across the economy as a whole.
[9] Skills shortage vacancies arise when a vacancy is hard to fill because applicants lack the skills, experience or qualifications that the company seeks.

There is a high demand for graduate labour amongst Creative Economy employers. The sector itself is highly skilled with more than half (59 per cent) of jobs filled by those with degree level and above qualifications, compared to less than an third of jobs (32 per cent) in the economy as a whole.[10] Correspondingly, the level of graduate recruitment is much higher than in the economy as a whole – with 22 per cent of digital and creative firms recruiting an individual straight from university in the last three years compared to just 14 per cent of all firms. However, businesses in the sector were also more likely to rate the preparedness of graduates more negatively, and this was particularly the case with digital employers.[11]

The sector is less diverse than the economy as a whole which is restricting the supply of labour. Women are under-represented in Creative Economy jobs – 36 per cent of jobs are filled by women compared to 47 per cent of all UK jobs.[12] This is particularly pronounced in the digital sub-sector where just 20 per cent of workers are female, UKCES (2012) notes that the low level of women entering the sector restricts the pool of labour and may be contributing to recruitment challenges.[13] Other diversity challenges include:

- Recent research has highlighted that the vast majority of jobs (92 per cent) were filled by workers from more advantaged socio-economic backgrounds (NS-SEC 1-4) against 66 per cent of jobs in the wider economy;[14] and,

- Although the representation of BAME workers for the Creative Economy overall is in line with the economy as a whole, there is significant underrepresentation amongst some sub-sectors – most notable, architecture and music, performing and visual arts.

There is a high incidence of self-employment/freelancing amongst creative workers – 30 per cent of those who work in the sector are self employed, double that of the economy as whole.[15] And the growth rate for self-employment has been twice that of employee jobs over the period 2011 to 2013, with figures of 11.5 per cent and 6.5 per cent respectively. Whilst this flexibility is beneficial to the sector, due to the nature of much of the available work – e.g. time limited projects requiring a group of individuals with very specific skills – it raises questions about training and personal development of the workforce. As noted by UKCES (2015), the self-employed are much less likely to undertake work-related education or training and often find it difficult to identify when they need to upskill themselves.[16]

[10] DCMS (June 2015) Creative Industries: Focus on Employment
[11] 22 per cent of digital employers felt that graduates were poorly or very poorly prepared for work compared to just 13 per cent across the economy as a whole
[12] DCMS (June 2015) Creative Industries: Focus on Employment
[13] UKCES (2012) Sector Skills Insights
[14] DCMS (June 2015) Creative Industries: Focus on Employment
[15] DCMS (June 2015) Creative Industries: Focus on Employment
[16] UKCES (2015) Sector insights: skills and performance challenges in the digital and creative sector, Evidence Report 92

"Digital technology is reshaping the economic environment, demanding new business models and multidisciplinary solutions that combine creativity and technological know-how and business skill". **Universities UK (2010)**

Employers within the sector are increasingly seeking a 'fusion' of skills as the boundaries between creative and digital become increasingly blurred. Universities UK (2010) highlight that there is an increasing need for individuals who have a 'fusion' of technology, business, creative and interpersonal skills.[17] The concentration of employment in micro businesses also increases the need for individuals who have a broad range of skills and who are willing to take up responsibilities outside of their core expertise.[18]

2.4 Issues for skills providers

The supply of skills comes from two sources: the investments that individuals make in their initial education and training before they enter the labour market and the investments that employers make in developing the skills of their workforce. **UKCES (2012)**

The majority of training carried out in the sector is done informally.[19] This is reflected in findings from the Employers Skills Survey 2014 which shows that employers are slightly less likely to have arranged training over the last 12 months than firms in the economy as a whole. However, UKCES (2015) notes that employers do encourage and enable workers to undertake personal development through online resources, on the job training and support from peers.[20]

As highlighted in the previous section **the high number of freelancers in the sector presents personal/workforce development challenges.** In the creative, rather than digital, occupations this problem is more pronounced due to the higher concentration of self-employment in the sector, for instance, according to Creative SkillSet (2010)[21] just 59 per cent of employers extend training provision to freelancers on short-term contracts.

There are particular concerns about the ability of the education system to supply the quantity and quality of workers needed to meet the demand for the digital sector. The sector is forecast to expand significantly over the next 10 years and the digital sub-sector will

[17] Universities UK (2010) Creating Prosperity: the role of higher education in driving the UK's Creative Economy
[18] Creative & Cultural Skills (CCS) and Skillset (2011) Sector Skills Assessment for the Creative Industries of the UK. Skillset and Creative and Cultural Skills
[19] UKCES (2012) Sector Insights: Digital and Creative, Evidence Report 49
[20] UKCES (2015) Sector insights: skills and performance challenges in the digital and creative sector, Evidence Report 92
[21] Creative Skillset (2010) 2010 Creative Media Employer Survey. Creative Skillset, London.

need 518,000 workers for roles in the three highest skilled occupational groups to meet replacement and expansion demand.[22] However, UCKES (2015) notes that only 164,000 individuals graduated from a first degree in computer science over the last decade – and although these figures are not directly comparable they do indicate that there may be a sizeable gap between employers' demand for digital graduates and the ability of the higher education system to fulfil that quantity of demand.

Employers also have concerns with the ability of higher education institutions to keep pace with technological changes or provide students with sufficient practical experience.[23] A recent study by NESTA [24] found that over half of video game employers found it difficult to recruit graduates with the right skills straight from education, whilst a report by the National Centre for Universities and Business published earlier this year highlighted that computer science graduates have the highest unemployment rates six months after graduation.[25] The fact that this occurs alongside significant demand for digital skills implies that there is a skills mismatch between what employers and looking for and the skills young graduates are equipped with.

Historically businesses in the Creative Economy have had limited engagement with apprenticeship and numbers of advanced apprenticeships remain very low. In 2014/15 there were just 8,400 apprenticeship starts in the creative and digital sector[26] down from 15,240 in 2012/13. Large declines in the number of starts for intermediate (-3,270 or -58 per cent) and advanced apprenticeships (-3,700 or -41 per cent) accounted for the fall in overall numbers. The number starting higher apprenticeships increased slightly over the period (from 430 to 500 between 2012/13 and 2014/15) however this was from a very low base.

Studies have highlighted that apprenticeships may not be well suited to all areas of the Creative Industries due to the time-limited nature of much of the work.[27] Businesses need to be able to ensure that they have projects and work for long enough to sustain an apprentice in work for a full year; this may not be possible for micro businesses or for self-employed workers who wish to expand their business.

2.5 Future demand for skills

The sector is expected to experience significant expansion and replacement demand over the next decade. UKCES Working Futures employment projections[28] for sector as a whole

[22] UKCES (2014) Working Futures 2012-2020, UKCES
[23] See for instance: UKCES (2012) UK Commission's 2012 Sector Skills Insights: Digital and Creative. UKCES Evidence Report no. 49. or NESTA (2013). A Manifesto for the Creative Economy.
[24] NESTA (2011) Next Gen, NESTA, London
[25] National Centre for Universities and Business (2015) Growing Experience: A review of undergraduate placements in computer science, NCUB and BIS, London
[26] Note that Sector Subject Area Arts Media and Publishing has been taken to represent
[27] Creative & Cultural Skills (CCS) (2013). Building a Creative Nation: Evidence Review. CCS and The National Skills Academy, London.
[28] UKCES (2014) Working Futures 2012-2020, UKCES

suggests that in addition to the 340,000 net change in the creative and digital sectors between 2012-2022 there will be a need for another 834,000 individuals to replace workers that leave the sector. This equates to the demand for an additional 1.2 million workers. Demand will be greatest for the top three highest skilled occupations (managers, directors, and senior officials, professionals, associate professionals and technical occupations). This scale of growth alongside continued rapid technological change will have far reaching consequences for the demand for skills within the sector.

A recent report for UKCES (June 2015)[29] has set out the key drivers of the future demand for skills in creative and digital industries. The drivers identified include: **technological**; **regulatory**; and, **economic and demographic**. The skills implications of each are summarised below.

Technological drivers

The digital and creative sectors are at the forefront of technological change. This has major skill implications requiring the need for continuous workforce/personal development. As more of the creative sector becomes digitised there will be an even greater demand for the workforce to upgrade their skills. There will be a continued and increasing need for staff to who can think strategically about how businesses can capitalise on emerging new technologies. In such a rapidly evolving sector it is difficult to forecast the specific skills implications of new technologies however a number of important trends include:

- **Economy-wide digitisation** is driving the demand for digital skills and will continue to do so. All firms will require a larger proportion of their workforce to have digital skills and employees will need them to move up the career ladder.

- **The risk of cyber threats** means that it will become increasingly important that all workers in the sector have a basic knowledge of good practice in cyber security, whilst skilled cyber security experts with extremely advanced technical knowledge will also be required.

- **Convergence of creative content across platforms** is continuing to blur the lines between creative and digital. Employers are increasingly seeking individuals with a breadth of knowledge to deliver outputs across different platforms. Alongside this there will be demand for those with strategic thinking skills to identify how outputs can best be delivered across platforms. This has implications for leadership skills which will be needed to ensure the larger numbers of people involved in delivering content are collaborating effectively.

- The popularity of **cloud-based computing** is also expected to continue to increase.

[29] UKCES (2015) Sector Insights: skills and performance challenges in the digital and creative sector

The main skills requirements for cloud computing include security, networking, virtualisation skills and big data analytics.

- **New approaches to data** (such as Big Data). With increasing connectivity has come an increase in available data and more opportunities to manage and capture value from it. Research[30] has identified three types of skills that are associated with Big Data: deep analytical talent based on a combination of advanced statistical, analytical and machine learning skills; individuals, who can understand the value that can be extracted, interpret results and use them; and, supporting technology roles to develop the software and hardware.

- **New business models and collaborative platforms**. New business models such as Amazon and Etsy have created new opportunities which allow businesses to either bypass traditional retail or to find new ways to mediate it, whilst new pricing structures – such as subscription services (e.g. Spotify) or charges for premium content (e.g. FT online) – have allowed businesses to develop new income streams.[31] These developments suggest an increasing need for experts in consumer behaviour and pricing structures.

Regulatory, economic and demographic drivers.

- **Regulatory factors** such as changes to rules on the ownership and use of data and tax incentives could also have an impact on the number and type of workers needed. This will increase the need for experts with regulatory and legal expertise to help businesses shape and comply with new regulations.

- New and more proactive **human resources functions** may be needed to meet the pressing need to recruit large numbers of new workers, particularly to digital roles, and to encourage greater workforce diversity.

- **Demographic factors** could influence demand for digital goods and services in areas such as health technologies.

2.6 Tackling the issues

As set out in this chapter the Creative Economy has ongoing and pressing needs for skills development. However, technological change is both too rapid and uncertain to make accurate predictions about which areas to invest in skills training. This is reflected in employer's approaches to training in the sector, with evidence showing that employers tend to respond to skills needs as they arise rather than attempt to forecast skills they might need

[30] Oxford Economics (2014) Assessing the demand for Big Data and Analytics Skills 2013-2020, Forfas, Ireland
[31] Technology Strategy Board (2013) Creative Industries Strategy 2013-16. Technology Strategy Board/Innovate UK, Wiltshire.

in the future and train individuals to meet them.[32]

Yet, as set out by UKCES (2015) there are a number of issues that need addressing at the industry level. Some of the initiatives employers and sector bodies have put in place to try and address them include:

- Initiatives to try and **increase the future diversity of the sector** – such as TechFuture Girls which aims to encourage girls aged 10-14 to consider further education or a career in technology.

- Revamping of apprenticeships to ensure that they are **better aligned with employer demand**, such as the digital skills Trailblazer Apprenticeship and the Tech Industry Gold apprenticeship scheme.

- Employers are building **links with universities** to ensure access to the skills they need and provide graduates and students with internships and work experience to build their practical skills.

- Support for **workforce training** through initiatives such as Skills Investment Funds (SIFs) coordinated by Creative Skillset which provides funding for training in film, high end TV, animation and visual effects and the Tech Partnership Fund which supports greater training in the digital sector.

[32] Creative Lancashire Workshop (reference pending).

3. The Creative Economy in Lancashire

The Creative Economy in Lancashire represents 5.7 per cent of jobs locally, employing over 30,000 people and adding £1.3 billion (GVA) to the economy. Up to 22,000 of these jobs are in Creative Industries and 14,000 in creative occupations across other sectors. The jobs in Lancashire's Creative Industries are concentrated in IT, software, and computer services.

There are over 4,500 enterprises in Lancashire's Creative Industries – almost 90 per cent of these are micro businesses with fewer than 10 employees. Recent change indicates that Lancashire's Creative Industries have not had jobs growth over 2009 to 2013. The Creative Industries in Lancashire are largely concentrated within a few urban centres. Preston, Chorley, and Blackburn with Darwen are the local authorities with 40 per cent of Lancashire's employees in these industries.

3.1 Sources of data

The quantitative evidence of the Creative Economy within an area such as Lancashire is heavily constrained by the availability and robustness of data. We adopted an approach that enables us to draw from official data sources – e.g. national statistics published by the Office for National Statistics (ONS). We also looked to be experimental by working with partners at D&B UK to draw from information on the business directories of firms in Lancashire.

The data sets we used consist of:

- ONS Business Register and Employment Survey – A national, annual survey of workplaces and employment linked to the Inter-Departmental Business Register. Data for this study was accessed under license via the Nomis website.

- ONS Business Demography – An annual statistical bulletin containing headline figures describing births, deaths and survivals of UK enterprises.

- ONS Annual Population Survey – Drawing on the quarterly Labour Force Survey, this provides reported characteristics of the labour force. By combining multiple years of data it is possible to increase the accuracy of the results.

- ONS Census 2011 – A detailed snapshot conducted at household level across England and Wales on 27th March 2011. Data for this study was accessed via Nomis.

- D&B UK with a core database of companies that includes all those registered with Companies House. Our extract covers all businesses in Lancashire and includes all businesses with either a primary, secondary or tertiary 4-digit SIC code which is in

line with the Creative Industries (see Annex A).

- HESA (Higher Education Statistics Agency) data on the sector in Lancashire and the North West.

- Information from the LEP Data Cube on historic learning-aim starts and achievement data funded by the Skills Funding Agency (SFA) and Education Funding Agency (EFA) for Lancashire, for 2012/13 & 2013/14.

Using this diverse range of sources is not straightforward. Each data source draws from different survey samples, for different purposes, using different methods, and over different time periods and different geographies.

3.2 Contribution to the economy in Lancashire

We estimate that the total employment in the 'Creative Economy' in Lancashire is above 30,000 jobs. We emphasise that this includes jobs within Creative Industries and jobs in creative occupations across other industries. The ONS Annual Population Survey is the only employment survey that provides both industrial and occupational data. This indicates that there are over 36,000 jobs in Lancashire's Creative Economy. The composition of this data is shown in Table 3.1.

Table 3.1 Total employment in the Creative Economy in Lancashire

	Creative Industries	Creative occupations in other industries	Creative Economy	Creative Economy, share of jobs
Lancashire	22,400	14,100	36,500	5.7%
UK	1,599,100	926,700	2,525,700	8.6%

Source: ONS Annual Population Survey, 2011-2014

The data indicates that within Lancashire, there are over 22,000 jobs in Creative Industries. Within the Creative Industries, the data indicates over half of jobs are in creative occupations. Across other sectors, there are a further 14,000 jobs in creative occupations. That is there are more jobs in creative occupation outside of the Creative Industries than there are within Creative Industries. The estimated share of this Creative Economy is 5.7 per cent of total employment in Lancashire. This is less than the share for the UK overall.

The Annual Population Survey is only one dataset, and although it is the most informative, we must be mindful of challenges of sample size and survey methods. Therefore, we look to other sources to help validate our estimate:

- The Census 2011 asked residents their occupations. This identified 21,000 people in creative occupations.

- The ONS Business Register & Employment Survey reports 11,000 jobs within Creative Industries in Lancashire in 2013. This is a significantly lower figure. It may reflect that the dataset does not include micro-businesses.

- The company database from D&B UK identifies over 17,000 jobs within business in Lancashire classified as Creative Industries. This is also a lower figure.

The contrasts in the numbers illustrate the difficulties in defining and measuring a concept such as the Creative Economy. However, the range of numbers from both industries and occupations, imply that a figure of over 30,000 jobs is a defensible estimate.

There is also interest in the economic value – the Gross Value Added (GVA) of the Creative Economy in Lancashire. Unlike employment, which itself is inconsistent across different survey datasets, there is limited published data to draw from. We are therefore required to provide a proxy estimate for the GVA of the Creative Economy in Lancashire.

We estimate a ball-park figure of around £800 million for Lancashire's Creative Industries. Our calculation is presented below (Table 3.2) based on assumptions from data on the GVA for Creative Industries in the UK, Lancashire's share of UK Creative Industry jobs, and that Lancashire GVA per job in Creative Industries is likely to be less than Creative Industries of the UK as whole.

There is even less information to develop a calculation on the size of the Creative Economy. If it is assumed that people in creative occupations share the same productivity as those within Creative Industries, we estimate a ball-park figure of almost £1.3 billion.

Table 3.2 Estimating GVA of the Creative Economy in Lancashire

Assumption	Source	Assessment
GVA for Creative Industries in the UK	The DCMS Statistical Release Creative Industries Economic Estimates January 2015 provides estimate for GVA for Creative Industries in the UK.	£76.9bn 4.7% of the UK economy.
Lancashire share of UK Creative Industry jobs	ONS Annual Population Survey indicates Lancashire has 1.4 per cent of UK jobs in Creative Industries (22,400 as share of 1,599,100).	1.4% share of £76.9bn = £1.08bn
Lancashire GVA per job in Creative Industries is likely to be less than UK average	The ONS Statistical Bulletin Regional Gross Value Added, December 2014, reports UK workplace GVA per head of 23,755, and Lancashire workforce GVA per head of 17,378 i.e. 0.74 ratio of UK average.	0.74 ratio of £1.08bn = £800m

Verification		
Estimate share of Creative Industries from Lancashire GVA.	The ONS Statistical Bulletin Regional Gross Value Added, December 2014, reports total Lancashire workplace GVA of £25.5bn. ONS Annual Population Survey indicates up to 640,000 workplace jobs in Lancashire. 22,400 jobs in Creative Industries around 3.5 per cent share. No adjustment made for productivity relative to other sectors.	3.5% share of £25.5bn = £892m
Creative Economy as adding 50-60 per cent of GVA above Creative Industries.	The ONS Annual Population Survey provided us with estimates for Lancashire of 22,400 jobs in Creative Industries but a further 14,100 in creative occupation i.e. plus 60 per cent.	£800m x 1.6 = £1.28bn

3.3 Composition of the Creative Industries

The Annual Population Survey also provides information on the composition of employment in Lancashire's Creative Industries. We find that:

- This is concentrated within IT, software & computer services
- Jobs in Architecture, Design, Museums and Galleries and Music are all just above the national average.
- Jobs in Film, TV, video, radio and photography appear to be less represented than the national average.

Table 3.3 Employment by sub-sector and share of Creative Industry

Creative Industries sub-sectors	Lancashire	Great Britain
Advertising and marketing	13%	13%
Architecture	8%	6%
Design: product, graphic and fashion	6%	4%
Film, TV, video, radio and photography	7%	12%
IT, software and computer services	41%	39%
Museums, galleries and libraries	8%	5%

Music, performing and visual arts	10%	9%
Publishing	9%	12%

Source: ONS Annual Population Survey, 2009-2014

3.4 The role of SMEs

There are over 4,500 enterprises in Creative Industries within Lancashire. We derived this result using the companies' database from D&B UK.

Table 3.4 Enterprises by sub-sector in Lancashire's Creative Industries

Creative Industries sub-sectors	Number	% Share
Advertising and marketing	360	8%
Architecture	310	7%
Design: product, graphic and fashion	230	5%
Film, TV, video, radio and photography	710	16%
IT, software and computer services	1,980	43%
Museums, galleries and libraries	200	4%
Music, performing and visual arts	400	9%
Publishing	320	7%

Source: D&B UK (2014)

The distribution of enterprises within Creative Industries reflects distribution of employment with the largest concentrations of enterprises in IT, software, and computer services.

Table 3.5 Lancashire's Creative Industry businesses by size band

Business size	Number of employees	Business units
No employees	0	400
Micro	1-9	4,000
Small	10-49	160
Medium	49-250	40
Large	250+	6
Total		**4,606**

Source: D&B UK (2014)

Most of these enterprises in Lancashire's Creative Industries have only a few employees.

Almost 90 per cent are micro businesses with fewer than ten employees, and so these account for around half of all Creative Industry jobs. But there are also large businesses with over 250 employees. These few firms account for up to 14 per cent of Creative Industry jobs in the area.

3.5 Recent trends

Our analysis of recent trends must draw from the ONS Business Register & Employment Survey. We emphasise that employment numbers in this survey will not match directly with the Annual Population Survey and will miss many small firms and self employed people. But it provides useful context on change in Creative Industries and what appears to be a loss of jobs over 2009 to 2013.

Table 3.6 Lancashire's Creative Industries, recent employment change

Creative Industries sub-sectors	Change in jobs, 2009-2013	% Change
Advertising and marketing	-800	-36%
Architecture	-100	-9%
Design: product, graphic and fashion design	400	+173%
Film, TV, video, radio and photography	-200	-19%
IT, software and computer services	300	+7%
Museums, galleries and libraries	-200	-17%
Music, performing and visual arts	500	+89%
Publishing	-600	-39%
Creative Industries	*-600*	*-5%*

Source: ONS Business Register & Employment Survey, 2013

This analysis indicates that overall jobs in Lancashire's Creative Industries reduced by 5 per cent between 2009 and 2013. This is a modest fall of 600 jobs, but compares to a national rise of 10 per cent in Creative Industries. Within Lancashire's Creative Industries, the falls were concentrated in publishing and advertising and marketing. These were partially offset by rises in design and visual arts.

3.6 Lancashire's Creative Hubs

The ONS Business Register & Employment Survey is also the key source to provide us with data on the geography of Creative Industries within Lancashire. There are variations in the concentration of activity in Creative Industries across Lancashire's local authority areas. Preston, Chorley, and Blackburn with Darwen are the local authorities with the greatest

number of employee jobs in these industries. These three areas are home to over 40 per cent of Lancashire's employees in these industries.

Table 3.7 Jobs in Creative Industries by Local Authority area

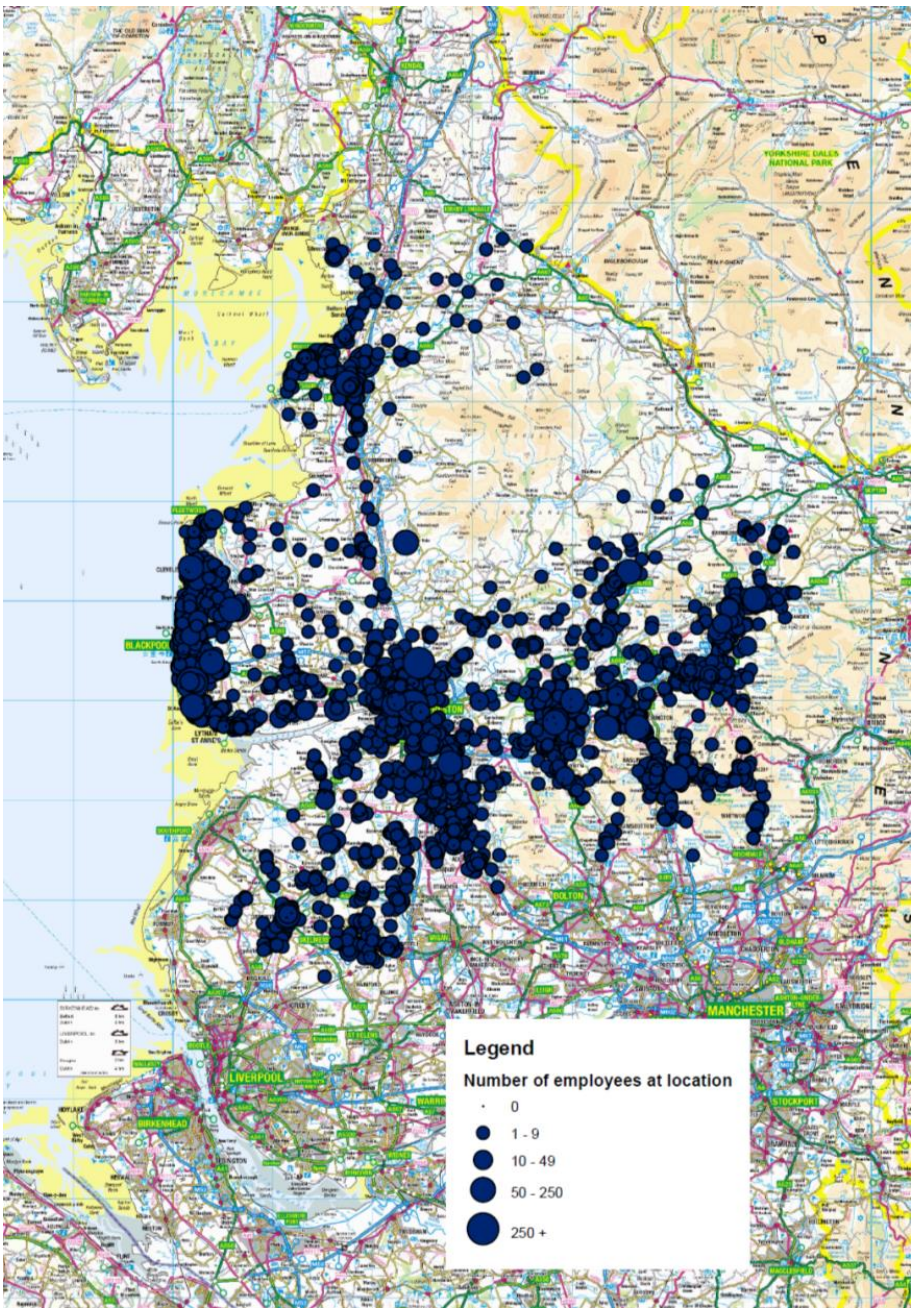
Local Authority District	Number of jobs	% of Lancashire's Creative Industries
Blackburn with Darwen	1,200	11%
Blackpool	800	7%
Burnley	400	4%
Chorley	1,600	14%
Fylde	900	8%
Hyndburn	200	2%
Lancaster	900	8%
Pendle	400	4%
Preston	1,800	16%
Ribble Valley	400	4%
Rossendale	500	5%
South Ribble	800	7%
West Lancashire	600	5%
Wyre	700	6%
Lancashire	**11,100**	

Source: ONS Business Register & Employment Survey (2013)

Another source of information on the geography of activity is the companies' database from D&B UK. The postcodes for these enterprises are mapped below in Figure 3.1.

This distributed geography but with distinct urban clusters of creative businesses offers both a challenge and an opportunity for Lancashire. Clusters thrive on proximity and the additionality that arises from cross-fertilisation of knowledge, information and ideas. This unique geography needs to be recognised in any actions taken to address both skills demand and supply.

Figure 3.1 Postcode locations of businesses in Lancashire's Creative Industries



Source: D&B UK. Note: This work is based on data provided through EDINA UKBORDERS with the support of the ESRC and JISC and uses boundary material which is copyright of the Crown.

3.7 Higher Education Students

This section presents analysis of the supply of skills from North West Higher Education Institutions (HEIs). Data is drawn from the Higher Education Statistics Agency (HESA) and

the definition of Creative Economy-related courses developed by Universities UK (2010).[33]

HESA figures show that in 2013/14 there were a total of 8,865 students (undergraduate and postgraduate) studying Creative Economy related subjects at Lancashire HEIs. The University of Central Lancashire had the highest number of students (5,205) of which just over half were studying creative arts and design subjects (2,700) followed by mass communication and documentation (940 or 18 per cent), architecture, building and planning students (790 or 15 per cent) and computer sciences (575 or 11 per cent).

Edge Hill University has the second number of students studying Creative Economy related subjects at just over 2,000, of which almost half (960) are studying creative arts & design, and a quarter are taking courses in mass communication & documentation (495). Around 1,600 students are studying Creative Economy related subjects at Lancaster University. A detailed breakdown is provided in Table 3.8 below.

Table 3.8 Creative Economy HE Students in Lancashire by University, 2013/14

Broad code	The University of Central Lancashire	Edge Hill Uni	Lancaster University	Total	% Provision
Computer Sciences	575	430	490	**1,495**	16.90%
Engineering & technology*	5	0	0	**5**	0.05%
Architecture, building & planning**	790	0	0	**790**	8.91%
Marketing	195	195	545	**935**	10.54%
Mass communication & documentation	940	495	155	**1,590**	17.93%
Creative arts & design	2,700	960	390	**4,050**	45.68%
Total	**5,205**	**2,080**	**1,580**	**8,865**	

* Only includes course related to – ceramics & glasses (J300), polymers & textiles (J400), and materials technology nec (J500)
** Does not include planning
Source: HESA

Locally in Lancashire, University students are predominantly studying Creative Arts and Design. Given the demand from local employers and the Creative Economy as a whole in

[33] Definition sourced from Universities UK (2010) Creating Prosperity: the role of higher education in driving the UK's Creative Economy

the UK lies predominantly in the need for a an increase in a range of digital skills, this presents a particular local challenge of potential skills recruitment and the retention of locally developed creative talent.

Table 3.9 Creative Economy HE students at North West HEIs 2013/14

	Computer sciences	Engineering & technology*	Architecture building and planning**	Marketing	Mass communications & documentation	Creative arts and design	Total
The University of Bolton	325	35	265	30	55	830	**1,540**
The University of Central Lancashire	575	5	790	195	940	2,700	**5,205**
University of Chester	320	0	0	125	360	780	**1,585**
University of Cumbria	35	0	20	5	125	925	**1,110**
Edge Hill University	430	0	0	195	495	960	**2,080**
The University of Lancaster	490	0	0	545	155	390	**1,580**
Liverpool Hope University	115	0	0	55	130	605	**905**
Liverpool John Moores University	1,075	0	1,100	215	775	1,325	**4,490**
The Liverpool Institute for Performing Arts	0	0	0	0	0	630	**630**
The University of Liverpool	515	5	785	215	185	255	**1,960**
The Manchester Metropolitan University	1,175	15	740	2,270	830	2,825	**7,855**
The University of Manchester	1,060	745	35	290	75	535	**2,740**
Royal Northern College of Music	0	0	0	0	0	790	**790**
The University of Salford	740	0	1,215	145	945	2,130	**5,175**
Total	**6,855**	**805**	**4,950**	**4,285**	**5,070**	**15,680**	**37,645**
% by skills area	18.2%	2.1%	13.2%	11.4%	13.5%	41.7%	

Table 3.9 shows student numbers for Creative Economy related subjects in North West HEIs. The table shows that:

- The Manchester Metropolitan University dominates in terms of absolute numbers

with over 7,800 students studying Creative Economy related courses, followed by Central Lancashire and Salford universities.

- Manchester Metropolitan has the largest number of students in **computer science** followed by Liverpool John Moores and the University of Manchester. There were 6,855 students in this area across the North West.

- The University of Salford and Liverpool John Moores have the greatest number of students in **architecture, building and planning** with Central Lancashire having the third largest concentration of students.

- Over half of higher education students studying **marketing** in the North West are based at Manchester Metropolitan University.

- Those studying subjects related to mass communication & documentation and creative arts and design are more evenly distributed across North West HEIs.

Table 3.10 Distribution of Creative Economy HE students Broad Subject Area at North West HEIs 2013/14

	% Lancashire HEI Students	% All North West Students	% All UK Students
Computer Sciences	16.90	18.21	23.70
Engineering & technology*	0.05	2.14	0.96
Architecture, building & planning**	8.91	13.15	11.00
Marketing	10.54	11.38	7.20
Mass communication & documentation	17.93	13.47	12.96
Creative arts & design	45.68	41.65	44.19
Total	**100**	**100**	**100**

* Only includes course related to – ceramics & glasses (J300), polymers & textiles (J400), and materials technology not elsewhere classified (nec) (J500)
** Does not include planning
Source: HESA

While the distribution across broad areas differs slightly when all North West HEIs (including Lancashire HEI's) are analysed, the general picture remains the same with over 40 per cent classed as studying Creative Arts and Design compared to under 20 per cent in computer science. **For computer sciences the Lancashire provision is 7 per cent below the national average and taking into account the wider North West, it is some 5.5 per cent below the national level.**

3.8 Data cube

Information from the LEP Data Cube provides historic learning-aim starts and achievement data funded by the Skills Funding Agency (SFA) and Education Funding Agency (EFA) for Lancashire, for 2012/13 & 2013/14. Data are available on a learner and delivery basis. Learner location, based on the learners' resident postcode, presents the data in terms of where individuals live. However, this may not be the same local authority location in which they undertake their study or work. Delivery location postcode data relates to training being undertaken within an area, though a proportion of the learners may be resident outside of the delivery location.

All Data Cube analysis presented below focuses on starts and achievements within the "Creative and Digital" sector, which includes the following sub-sectors:

- Information and Communication Technology
- ICT for Practitioners
- ICT for Users
- Arts Media and Publishing
- Crafts, Creative Arts and Design
- Media and Communication
- Publishing and Information Services.

Data Cube Learner Analysis

The learner Data Cube shows that the number of creative and digital starts in Lancashire was just over 38,000 in 2013/14, slightly lower than in 2012/13 where the figure stood at 43,000. Learners are concentrated in the sub-sectors of crafts, creative arts and design (11,550 learner starts) and ICT for Users (13,400 learner starts). Most starts were made by those aged over 25 (62 per cent of the total).

Table 3.11 Learner starts by sub-sector 2013/14

	Under 16	16-18	19-24	25+	Total
Information and Communication Technology	**29**	**3,435**	**2,521**	**13,863**	**19,848**
Information and Communication Technology	0	2	11	61	**74**

ICT Practitioners	0	2,462	1,303	2,613	**6,378**
ICT for Users	29	971	1,207	11,189	**13,396**
Arts, Media and Publishing	**68**	**6,690**	**1,682**	**9,910**	**18,350**
Arts, Media and Publishing	0	3	22	133	**158**
Performing Arts	37	1,979	249	1,349	**3,614**
Crafts, Creative Arts and Design	28	2,854	1,160	7,507	**11,549**
Media and Communication	3	1,831	210	502	**2,546**
Publishing and Information Services	0	23	41	419	**483**
Grand Total	**97**	**10,125**	**4,203**	**23,773**	**38,198**

Source: LEP Data Cube

Table 3.12 Learner starts by sub-sector 2012/13

	Under 16	16-18	19-24	25+	Total
Information and Communication Technology	**40**	**5,372**	**2,935**	**13,351**	**21,698**
Information and Communication Technology	4	149	112	678	**943**
ICT Practitioners	1	2,671	1,469	2,799	**6,940**
ICT for Users	35	2,552	1,354	9,874	**13,815**
Arts, Media and Publishing	**290**	**8,146**	**1,878**	**11,169**	**21,483**
Arts, Media and Publishing	234	195	95	906	**1,430**
Performing Arts	20	2,221	220	1,237	**3,698**
Crafts, Creative Arts and Design	21	3,593	1,330	8,365	**13,309**
Media and Communication	15	2,136	225	618	**2,994**
Publishing and Information Services	0	1	8	43	**52**
Grand Total	**330**	**13,518**	**4,813**	**24,520**	**43,181**

Source: LEP Data Cube

The learner Data Cube shows that creative and digital starts in Lancashire are concentrated at NVQ Level 2 and below (equivalent to GSCE level) making up around 62 per cent of total starts in creative and digital subjects. At these levels, in 2014/15, some 52 per cent were studying ICT, however, as might be expected, almost all were studying as practitioners and

users (99.6 per cent) with 30 per cent studying Crafts, Creative Arts and Design.

Table 3.13 Learner starts by NVQ Level 2013/14

	Under 16	16-18	19-24	25+	Total
Entry level	44	126	433	2,718	**3,321**
Level 1	19	1,107	1,684	4,521	**7,331**
Level 2	31	1,084	773	2,666	**4,554**
Level 3	2	7,631	402	421	**8,456**
Level 4 (original)	0	169	386	220	**775**
Not applicable	1	8	524	13,227	**13,760**
Grand Total	**97**	**10,125**	**4,203**	**23,773**	**38,198**

Source: LEP Data Cube

Lancaster County Council accounted for the most creative and digital starts in the LEP area in 2013/14 at around 9,350, followed by Manchester College (5,500), and Preston College (3,210). Table 3.14 shows the top 10 providers in Lancashire LEP and combined, they accounted for just over 79 per cent of all starts in the sector in 2013/14.

Table 3.14 Learner starts by age and top 10 largest providers, 2013/14

	Under 16	16-18	19-24	25+	Total
Lancashire County Council	0	1	316	9030	**9,347**
The Manchester College	0	329	1,825	3,349	**5,503**
Preston College	11	790	333	2,073	**3,207**
Blackpool and the Fylde College	58	656	309	1,492	**2,515**
Blackburn College	2	889	320	743	**1,954**
Runshaw College	0	1,171	41	401	**1,613**
Burnley College	0	941	132	498	**1,571**
Blackpool Unitary Authority	0	0	86	1441	**1,527**
Learndirect Limited	0	0	77	1438	**1,515**
The Blackpool Sixth Form College	0	1,428	3	0	**1,431**

Source: LEP Data Cube

The learner Data Cube shows that the number of creative and digital achievements in Lancashire was around 32,300 in 2013/14, slightly lower than in 2012/13 where the figure

stood at 36,400. Achievements were concentrated in the sub-sectors of crafts, creative arts and design (9,710 learner achievements) and ICT for Users (11,940 learner achievements). Most achievements were made by those aged over 25 (58 per cent of the total). The balance across Creative Arts and ICT remains fairly constant at 30 per cent and 53 per cent respectively.

Table 3.15 Learner achievements by sub-sector 2013/14

	Under 16	16-18	19-24	25+	Total
Information and Communication Technology	**27**	**2,881**	**1,966**	**12,088**	**16,962**
Information and Communication Technology	0	2	12	73	**87**
ICT Practitioners	1	1,993	880	2,057	**4,931**
ICT for Users	26	886	1,074	9,958	**11,944**
Arts, Media and Publishing	**45**	**5,869**	**1,223**	**8,165**	**15,302**
Arts, Media and Publishing	0	4	21	132	**157**
Performing Arts	36	1,766	174	1,173	**3,149**
Crafts, Creative Arts and Design	5	2,531	844	6,332	**9,712**
Media and Communication	4	1,552	152	416	**2,124**
Publishing and Information Services	0	16	32	112	**160**
Grand Total	**72**	**8,750**	**3,189**	**20,253**	**32,264**

Source: LEP Data Cube

Table 3.16 Learner achievements by sub-sector 2012/13

	Under 16	16-18	19-24	25+	Total
Information and Communication Technology	**34**	**4,507**	**2,182**	**11,634**	**18,357**
Information and Communication Technology	3	41	91	619	**754**
ICT Practitioners	0	2,179	1,007	2,259	**5,445**
ICT for Users	31	2,287	1,084	8,756	**12,158**
Arts, Media and Publishing	**242**	**6,931**	**1,354**	**9,535**	**18,062**
Arts, Media and Publishing	204	112	71	838	**1,225**

Performing Arts	10	1,908	143	975	**3,036**
Crafts, Creative Arts and Design	22	3,034	980	7,195	**11,231**
Media and Communication	6	1,876	152	510	**2,544**
Publishing and Information Services	0	1	8	17	**26**
Grand Total	**276**	**11,438**	**3,536**	**21,169**	**36,419**

Source: LEP Data Cube

The majority of achievements are at Level 2 and below (62 per cent), just over a third are at Level 3 (36 per cent) and just 3 per cent of achievements are at Level 4.

Table 3.17 Learner achievements by NVQ Level 2013/14

	Under 16	16-18	19-24	25+	Total
Entry level	44	119	407	2,396	**2,966**
Level 1	9	954	1,175	3,619	**5,757**
Level 2	15	849	533	2,187	**3,584**
Level 3	3	6,635	316	330	**7,284**
Level 4 (original)	0	185	256	141	**582**
Not applicable	1	8	501	11,580	**12,090**
Grand Total	**72**	**8,750**	**3,189**	**20,253**	**32,264**

Source: LEP Data Cube

Wirral Metropolitan College accounted for the most creative and digital achievements for learners living in the LEP area in 2013/14 at around 4,700, followed by North Yorkshire County Council (3,280), and Bolton Metropolitan Borough Council (3,180). Table 3.18 shows the top 10 providers for learners who were residents in Lancashire LEP and combined, they accounted for just over 60 per cent of all achievements in the sector in 2013/14.

Table 3.18 Learner achievements by Top 10 largest providers, 2013/14

	Under 16	16-18	19-24	25+	Total
Wirral Metropolitan College	0	2	184	4,508	**4,694**
North Yorkshire County Council	0	131	915	2,237	**3,283**
Bolton Metropolitan BC	0	0	105	3,074	**3,179**
Huddersfield Textile Training	2	188	209	1,393	**1,792**

Limited					
Nelson and Colne College	28	365	155	952	**1,500**
Craven College	0	0	50	1,114	**1,164**
The City Literary Institute	9	442	76	465	**992**
Mary Ward Settlement	0	963	3	0	**966**
Hopwood Hall College	0	936	7	0	**943**
Blackburn College	0	0	55	880	**935**

Source: LEP Data Cube

Data Cube Delivery Analysis

The delivery Data Cube shows that the number of creative and digital starts in Lancashire based providers was just over 38,400 in 2013/14, slightly lower than in 2012/13 where the figure stood at 43,780. Delivery was concentrated in the sub-sectors of crafts, creative arts and design (11,840 starts) and ICT for Users (13,000 starts). The proportions across Creative Arts and ICT again remain relatively constant. Most starts were made by those aged over 25 (62 per cent of the total).

Table 3.19 Delivery starts by sub-sector 2013/14

	Under 16	16-18	19-24	25+	Total
Information and Communication Technology	**31**	**3,447**	**2,607**	**13,356**	**19,441**
Information and Communication Technology	3	2	11	61	**77**
ICT Practitioners	0	2,452	1,384	2,522	**6,358**
ICT for Users	28	993	1,212	10,773	**13,006**
Arts, Media and Publishing	**67**	**6,685**	**1,835**	**10,383**	**18,970**
Arts, Media and Publishing	0	3	21	141	**165**
Performing Arts	37	1,989	324	1,510	**3,860**
Crafts, Creative Arts and Design	27	2,840	1,224	7,753	**11,844**
Media and Communication	3	1,828	209	513	**2,553**
Publishing and Information Services	0	25	57	466	**548**
Grand Total	**98**	**10,132**	**4,442**	**23,739**	**38,411**

Source: LEP Data Cube

Table 3.20 Delivery starts by sub-sector 2012/13

	Under 16	16-18	19-24	25+	Total
Information and Communication Technology	**40**	**5,438**	**2,922**	**13,508**	**21,908**
Information and Communication Technology	4	158	108	684	**954**
ICT Practitioners	0	2,723	1,498	2,904	**7,125**
ICT for Users	36	2,557	1,316	9,920	**13,829**
Arts, Media and Publishing	**291**	**8,266**	**2,005**	**11,314**	**21,876**
Arts, Media and Publishing	235	310	145	888	**1,578**
Performing Arts	20	2,278	230	1,387	**3,915**
Crafts, Creative Arts and Design	21	3,578	1,400	8,369	**13,368**
Media and Communication	15	2,098	221	628	**2,962**
Publishing and Information Services	0	2	9	42	**53**
Grand Total	**331**	**13,704**	**4,927**	**24,822**	**43,784**

Source: LEP Data Cube

The delivery Data Cube shows that creative and digital starts in Lancashire are concentrated at NVQ Level 2 and below (equivalent to GSCE level) making up around 61 per cent of total starts in creative and digital subjects, with over a third of delivery at Level 3 (34 per cent).

Table 3.21 Delivery starts by level 2013/14

	Under 16	16-18	19-24	25+	Total
Entry level	44	133	525	2,676	**3,378**
Higher level	0	0	0	0	**0**
Level 1	19	1,124	1,745	4,389	**7,277**
Level 2	31	1,047	777	2,589	**4,444**
Level 3	1	7,573	388	390	**8,352**
Level 4 (original)	0	247	467	226	**940**
Not applicable	3	8	540	13,469	**14,020**
Grand Total	**98**	**10,132**	**4,442**	**23,739**	**38,411**

Source: LEP Data Cube

Lancashire Country Council accounted for the most creative and digital starts in the LEP area in 2013/14 at around 9,990, followed by Manchester College (5,430), and Preston College (3,390). Table 3.22 shows the top 10 providers in Lancashire LEP and combined, they accounted for just over 83 per cent of all starts in the sector in 2013/14.

Table 3.22 Delivery starts by Top 10 largest providers, 2013/14

	Under 16	16-18	19-24	25+	Total
Lancashire County Council	0	1	333	9,657	**9,991**
The Manchester College	0	307	1,883	3,239	**5,429**
Preston College	11	947	398	2,033	**3,389**
Blackpool and The Fylde College	58	690	370	1,500	**2,618**
Runshaw College	0	1,565	58	440	**2,063**
Blackburn College	5	907	342	792	**2,046**
Burnley College	0	1,013	136	540	**1,689**
Blackpool Unitary Authority	0	0	93	1,478	**1,571**
Learndirect Limited	0	0	61	1,429	**1,490**
The Blackpool Sixth Form College	0	1,446	3	0	**1,449**

Source: LEP Data Cube

The delivery Data Cube shows that the number of creative and digital achievements at Lancashire based providers was around 32,000 in 2013/14, slightly lower than in 2012/13 where the figure stood at 36,280. Achievements were concentrated in the sub-sectors of crafts, creative arts and design (9,710 achievements) and ICT for Users (11,650 achievements). Most achievements were made by those aged over 25 (62 per cent of the total).

Table 3.23 Delivery achievements by sub-sector 2013/14

	Under 16	16-18	19-24	25+	Total
Information and Communication Technology	**25**	**2,888**	**2,025**	**11,716**	**16,654**
Information and Communication Technology	0	0	8	70	**78**
ICT Practitioners	0	1,987	921	2,018	**4,926**
ICT for Users	25	901	1,096	9,628	**11,650**
Arts, Media and Publishing	**44**	**5,872**	**1,401**	**7,998**	**15,315**

Arts, Media and Publishing	0	3	20	140	**163**
Performing Arts	36	1,772	239	1,151	**3,198**
Crafts, Creative Arts and Design	4	2,544	940	6,222	**9,710**
Media and Communication	4	1,535	156	389	**2,084**
Publishing and Information Services	0	18	46	96	**160**
Grand Total	**69**	**8,760**	**3,426**	**19,714**	**31,969**

Source: LEP Data Cube

Table 3.24 Delivery achievements by sub-sector 2012/13

	Under 16	16-18	19-24	25+	Total
Information and Communication Technology	**34**	**4,552**	**2,117**	**11,727**	**18,430**
Information and Communication Technology	3	45	92	645	**785**
ICT Practitioners	0	2,211	993	2,347	**5,551**
ICT for Users	31	2,296	1,032	8,735	**12,094**
Arts, Media and Publishing	**243**	**6,965**	**1,430**	**9,208**	**17,846**
Arts, Media and Publishing	205	180	105	831	**1,321**
Performing Arts	10	1,940	142	954	**3,046**
Crafts, Creative Arts and Design	22	3,004	1,024	6,922	**10,972**
Media and Communication	6	1,838	151	492	**2,487**
Publishing and Information Services	0	3	8	9	**20**
Grand Total	**277**	**11,517**	**3,547**	**20,935**	**36,276**

Source: LEP Data Cube

The majority of achievements are at Level 2 and below (62 per cent), just over a third are at Level 3 (35 per cent), and just 4 per cent of achievements are at Level 4.

Table 3.25 Delivery achievements by level, 2013/14

	Under 16	16-18	19-24	25+	Total
Entry level	44	128	497	2,355	**3,024**
Higher level	0	0	0	0	**0**
Level 1	9	963	1,226	3,523	**5,721**
Level 2	15	823	543	2,175	**3,556**
Level 3	1	6,575	292	330	**7,198**
Level 4 (original)	0	265	357	162	**784**
Not applicable	0	6	511	11,169	**11,686**
Grand Total	**69**	**8,760**	**3,426**	**19,714**	**31,969**

Source: LEP Data Cube

Lancashire Country Council accounted for the most creative and digital achievements in the LEP area in 2013/14 at 7,835, followed by Manchester College (3,930), and Preston College (3,010). Table 3.26 shows the top 10 providers in Lancashire LEP and combined, they accounted for just over 82 per cent of all achievements in the sector in 2013/14.

Table 3.26 Delivery achievements by Top 10 largest providers, 2013/14

	Under 16	16-18	19-24	25+	Total
Lancashire County Council	0	2	305	7,528	**7,835**
The Manchester College	0	205	1245	2479	**3,929**
Preston College	11	750	352	1,898	**3,011**
Blackpool and The Fylde College	37	698	339	1,426	**2,500**
Runshaw College	0	1,444	52	407	**1,903**
Blackburn College	1	742	230	716	**1,689**
Blackpool Unitary Authority	0	0	91	1382	**1,473**
Burnley College	0	839	111	464	**1,414**
The Blackpool Sixth Form College	0	1,264	3	0	**1,267**
Cardinal Newman College	0	1,238	8	0	**1,246**

Source: LEP Data Cube

The Growth Plans for the Lancashire Colleges (below) show a movement towards digital provision which provides a welcome shift in intended provision.

Table 3.27 Lancashire Colleges Capital Growth Plans: Creative and Digital

College	Pipeline Project Title	Key Driver	Subject Focus	LEP Alignment	Total Value (£)	Level of FE Capital Grant Required (£)
Accrington & Rossendale College	IT Infrastructure Development	Growth	Creative, digital, ICT & software engineering	Creative Digital & ICT	1,500,000	1,125,000
Blackpool & The Fylde College	Creative, Digital, ICT and Media Centre	Innovation and training in the Creative, Digital, ICT and Media.	To position the Fylde Coast as the Creative Centre outside London.	1, 2, 1. Education, training and skills development in a growth sector attracting increased participation to higher level qualifications	11,800,000	8,260,000
Blackpool & The Fylde College	Programming/ Coding Centre	Computing focus to support required skills development of coding/ programming for all	The centre will meet needs of Lancashire skills development in this area through innovative delivery.	1, 2, 3, 10. Innovation and skills development in ICT, Advanced Engineering driving growth in a transition to a highly skilled workforce	300,000	210,000
Lancaster & Morecambe College	Motion Capture and Moving Image Studio	Local sector cluster supporting the business community.	Developing a real work environment to industry standard for film, TV, photography and gaming industries.	Priority sector supporting wider business community, as identified in the LEP Local Growth Plan.	300,000	198,000
Nelson & Colne College	Creative and digital technologies	Changing needs in curriculum due to digital advances	Media journalism, online marketing and social media/digital intelligence	Creative, Digital and ICT	1,000,000	800,000
Training 2000	Lancashire Institute for Cyber Security Training	Growth	Digital and Media and all Sectors	Advance Manufacturing, Digital and Media, All Business and Commerce	2,325,000	1,163,000

4. Engagement with businesses, partners and skills providers in Lancashire

To deepen our knowledge of the demand and supply of skills for Lancashire's Creative Economy a number of specific engagement initiatives were undertaken, supported by Creative Lancashire.

1. Businesses in the Lancashire Creative Economy were engaged in the study through two routes:

Firstly, twenty in-depth interviews were held with owners or managers of creative businesses.

They were interviewed using a framework of semi-structured interviews to discuss with each business their core business model and to gain information on the relative importance of different barriers to growth.

The businesses that were interviewed covered a spectrum from purely creative to largely digital firms. Most have a fusion of digital and creative skills applied to the business. The businesses in the sample were larger and more mature than is the average for the sector driven by an interest in better understanding the capability to be sustainable and grow.

Secondly, an interactive workshop with 13 business attendees was held. The workshop presented the initial data from the study and sought to confirm findings and identify potential opportunities to address barriers.[34]

2. Eight in-depth interviews were undertaken with **stakeholders** in local government/local institutions that have a key role in supporting the area's Creative Economy.

These interviews aimed to a) validate findings from the business interviews and, b) provide specific insights into the support available for creative enterprises, identifying the main issues and concerns of stakeholders in the Creative Industries in Lancashire.

The interviews were semi-structured around four main themes: support provision; support policy; advocacy and communication; and, future needs including skills.

3. Finally a workshop with representatives from a comprehensive group of Lancashire **skills providers** was held. The workshop addressed specific questions regarding current engagement with business, how this could be improved and whether there were key

[34] Workshop held on 30th July 2015.

examples of good practice that could be identified, shared and developed further.

The following section provides a distillation of findings from these consultations and draws out those aspects especially relevant to employment and skills challenges in Lancashire.

4.1 Business and stakeholder consultation findings

Skills barriers were seen to be a universal problem across the UK and while these were also evidenced in Lancashire, businesses had adopted a range of strategies to cope with specific shortages and short-term skills gaps. These included outsourcing to places such as India when jobs could be well defined and coding skills in particular could be accessed at competitive prices. In addition a number of employers noted that they worked to share specific skills between businesses to meet short-term gaps.

In particular, businesses that were growing or seeking to grow identified particular skills gaps:

- A range of technical skills (primarily digital);
- Sales and marketing skills;
- Leadership skills.

The following specific skills shortages were identified by those attending the workshop:

- Project management;
- Front end programming and other specific programming skills;
- Specialist skills such as data analytics and cyber security;
- Individuals able to cover complex technical aspects within a creative website design brief;
- Business development skills including strategic planning, access to finance, staff recruitment and retention;
- Knowledge of relevant funding sources available including Venture Capital and European programme funding;
- Intellectual Property knowledge;
- People management skills specific to run staff recruitment campaigns to meet local skills shortfalls;

- Management, business development and business leadership skills (especially for business scale-up).

Some participants described difficulties recruiting skilled staff locally. It was also felt important to distinguish **specific as well as general skill shortages**. For example, skills shortages were experienced in specific programming areas such as front end development and cyber security.

Recruiting people who have appropriate digital skills was identified as being the principal problem, rather than sourcing people who have creative skills. There were felt to be different issues for digital companies as opposed to (creative) agencies.

Variation within the Creative Economy was another dominant theme. There was a view that 'creative' was not a useful concept because of these variations and that it was more useful to talk in terms of 'clusters' of companies that fed off each other. There was a strong view that there is a lack of meaning in the inclusion of digital companies in definitions of the Creative Economy – 'lumping everything together' – and that digital skills were required in every industry.

The use of SIC codes (DCMS 10) was described as being irrelevant to the jobs people actually do. Someone working in cyber security, for example, was the type of person who had a skill needed in the Creative Industries, but was unlikely to recognise themselves as part of the Creative Industries. The challenges in the video games sector was also given as an example of where there is a clash of perception between those with 'creative' and 'digital' skills.

It was also felt that the term 'Creative Industries' can be unhelpful when trying to foster cohesion or engage with those unfamiliar with its meaning. One consultee commented that it 'may work as a title but you still have to articulate what it means'. Perceptions of what constitutes the Creative Industries vary – 'not necessarily 'designy' or 'arty' – the sector is broadening rapidly in terms of scope, for example, into the 'internet of things', and the field of data science. There is a need to consider the wider ecosystem – "it is not just one sector (if it ever was)" said one interviewee.

The inherently **fast pace of change** was thought to be a strong driver of skills shortages in the sector. This was contrasted with inherently slower paced industries such as construction.

Business consultees thought that the slow pace of change in the public sector can hinder their ability to recognise where support is needed. The example was given of skills shortages in front end programming, recognised as a problem a few years ago; still not solved, but since then new problems have come along in addition.

The lack of **responsiveness of schools** was a concern, and it was suggested they were very far behind in terms of responding to the demand for the sort of skill shortages in the

industry. The participants were keen to explore the establishment of an “Academy” to meet their needs.

A number of the barriers to growth identified by the majority of businesses as moderate to severe were related to **sales and marketing**. There was also an emphasis on the need for individuals with a fusion of creative and digital skills alongside staff with business skills to think strategically about how they can capitalise on emerging new technologies.

These views were also echoed in stakeholder interviews, alongside a special mention by one interviewee on two key skills and knowledge related gaps in businesses’ ability to attract funding: a) a lack of finance skills required to unlock funding; and, b) a lack of knowledge about new funding streams and models (e.g. crowd-funding).

The challenges of recruitment and retention of staff with the necessary skills (particularly digital) was regarded by the great majority of companies as a serious barrier to business growth.

Businesses interviewed perceived that they were at a disadvantage in Lancashire in competing for talent, most notably with Manchester which was regarded by many as the most serious regional competitor. Indeed some of the companies had either set up or were considering setting up satellite offices in Manchester.[35]

This view was also reflected in the stakeholder interviews. Several interviewees mentioned that Manchester definitely had an influence over the perceptions of some Lancashire creative enterprises. Some felt that being a ‘Manchester’ business as opposed to a ‘Lancashire’ business had a particular cachet and many had relocated to Manchester to be part of the ‘scene’ and the perceived benefit of a Manchester address/postcode. One interviewee spoke of Manchester’s ‘gravitational pull’ – in terms of attracting both businesses into Manchester and attracting skilled creative talent out of Lancashire **(often straight from the institutions from which they had graduated).**

Salford’s Media City was cited as offering business opportunities, networks and an environment amongst like-minded people.

However, there was a counter-point which challenged this view, arguing that for some, building a business in Lancashire – specifically Preston in this case – was a preferred option, particularly where physical location was less important than it used to be. Whilst Manchester may be ‘where the work is’ (a common perception), it is also where your competitors are – and where the costs of running a business are greater.

Participants in the workshop also noted the variation between the Creative Economy in

[35] Although in one case this was not as a satellite office but a location to which staff could temporarily locate for delivery of projects which required or enabled dedication to tasks which required little interaction with the rest of the company.

Lancashire and that in other locations. Manchester and Salford, and the Shoreditch area of London were the most frequent comparators. Lifestyle choice was also described as a pull factor, attracting people in particular to London. There was a perception that people 'don't want to live here' and that we 'can't compete with Manchester or London'.

Retention of graduates within the area was described as a recognised problem in Lancashire. The development of a positive and distinctive proposition for lifestyle in Lancashire was needed.

In terms of **delivery mode**, coaching and mentoring by individuals who have 'been there, done that' was considered to be the most effective way of engaging directly and positively with businesses. Other measures found to be effective are:

- Workshops to raise awareness of opportunities and initiatives.
- The establishment and maintenance of networking opportunities – although with the caveat that 'there is only so much one can participate in'.
- Provision of low cost office space or other premises is popular particularly with IT specialists / photographers / programmers.

4.2 Skill provider consultation findings

Chapter 3 sets out the volume and level of current skill provision across Lancashire.

This demonstrates a potential mismatch in terms of the scale of provision which shows a significantly greater proportion of students studying to obtain "Creative Arts" rather than "Digital" skills (over 40 per cent compared to under 20 per cent). Within the 20 per cent, it is also noted that the predominant provision is geared towards ICT practitioners and users rather than technical ICT training.

Growth plans (Table 3.27) show however a shift towards more technical / digital provision.

The participants reported varying levels of engagement with the businesses in the sector.

- Some colleges reported that engagement was ad-hoc and tended to be reactive rather than proactive – i.e. engaged when redesigning curriculums.
- Others reported much more structured engagement – for instance the use of business networks to develop 'live projects' for students whereby business wrote specifications for pieces of work which were then matched to students.

Skills providers all highlighted significant challenges which make it difficult to engage with businesses in the sector to support their skills needs or access placements for students:

- **Business size** – the concentration of small and micro businesses and freelancers within the sector makes addressing skills needs challenging and limits the ability to effectively engage with many businesses.

- **Dynamic nature of the sector** – the skills needs to the sector are rapidly changing, so much so that "qualifications are out of date almost as soon as they have been developed".

- **Lack of flexible funding** – business need is often for short, flexible skills support rather than qualifications.

Participants discussed the need to link better with existing businesses forums so that they could more quickly understand and meet employer skills needs. The following networks were highlighted as important:

- **SHOUT** (http://shoutnetwork.co.uk/)

- **POW POW** (http://www.creativelancashire.org/html/POWWOW-copy_1405.html)

- **Downtown** (http://www.downtowninbusiness.com/)

- **PinkLink** (http://www.pinklinkladies.co.uk/)

Participants felt that it would be useful to map out and target larger businesses in the sector to act as **creative and digital skills ambassadors**, for example companies like Graham and Brown in Blackburn.

They also felt that collaboration could be aided by the geography of Lancashire. The dispersal, while presenting a challenge for "agglomeration" effects for business, offers an opportunity for the providers who could collaborate rather than compete.

5. Key Issues

Based on the research undertaken here and through our consultations with employers, stakeholders and skills providers we set out below the key issues we believe that need to be addressed to meet identified skills challenges. These in turn, will secure the current levels of employment in the Creative Economy and enable future growth.

The skills supply chain can be divided into two channels:

- Self-investment (through education);
- Employer investment (or increasingly by self-employed).

Taking these two channels provides a way to group our findings into broad sets of key issues for enhancement of the skills provision for the Creative Industries in Lancashire. In addition, there are specific issues that arise for skills recruitment and retention that relate to the relative location and positioning of Creative Industries in Lancashire. Taking these broad issues together with the three defining characteristics of the sector (rapid and dynamic change; diversity of skills needs; and, the nature of the business base) we can summarise the key areas for action as follows:

- Strengthening the local digital-skills pipeline by providers (5.1).
- Gearing skills enhancement to be appropriate for the dynamic and micro-based businesses in Lancashire Creative Industries (5.2).
- Improving recruitment and retention through addressing the challenges and opportunities of the positioning of Lancashire (5.3).

5.1 Strengthening the local digital-skills pipeline by providers

Across the UK and in Lancashire there is a significant skills mismatch and a need to re-balance towards technical digital skills, embedded in wider competencies.

While the Creative Economy has grown rapidly in the UK, our analysis of the sectors in Lancashire showed a marginal decline in employment between 2009 and 2013. However, as shown in Table 3.6 this reflected a re-balancing within the Lancashire Creative Economy with decline in advertising, marketing and publishing but an increase in employment in design, IT and software and music and performing arts. This diversity of employment and related skills sets within the Creative Economy poses a specific challenge to the forecasting of the nature and volume of skills required for future growth.

The Creative Economy is dynamic and rapidly changing but can now be said to be firmly based on digital technologies and the need for a wide range of digital and specific technical skills.

It is important however to note that employers in the sector are increasingly seeking individuals with a fusion of creative, technological, business and interpersonal skills. The need for those who can operate in a collaborative and distributed environment as well as bring technical knowledge are required to work in an environment which is fast-moving, project based, time limited and frequently geographically dispersed. Therefore the possession of specific digital skills, such as specialised programming skills, is necessary but not sufficient. Working practice across the Creative Industries requires significant interaction across projects and geography, therefore "soft" skill sets such as the ability to work collaboratively are also important.

Both employers and skills providers emphasised that specific sector skills development needed to begin much earlier in the cycle of skills development. Schools were seen to be vital in terms of early skills development, together with improved and more appropriate information and guidance both for students in terms of career advice but also for parents in relation to awareness of emerging career paths.

The dynamic nature of the Creative Industries poses a significant challenge for traditional skills provision and skills pipelines and supply chains. More active engagement between business and local colleges and HEIs, such as through the business networks highlighted by consultees, would provide a valuable channel to ensure that the dynamic nature of skills demand for the sector could be better recognised when future provision is being planned.

Consultees saw benefit in tapping into the knowledge base more easily, yet few had an overall view of the breadth of how business and skills providers could work together. Most that had engaged had done so on a narrow front and had little knowledge of how there could be mutual benefit from these interactions.

Facilitating this is a classic role for a knowledge cluster manager, who can provide brokerage support. The brokers could be located in the BOOST growth hub or work thorough the Creative and Digital Lancashire networks. There remains a need to assist companies to link constructively with knowledge providers as this remains a challenge for small companies. Good practice examples could be shared across providers, through a learning network.

5.2 Gearing skills enhancement for the dynamic and micro-based businesses in Lancashire Creative Industries

Forecasts suggest that creative and cultural industries are likely to grow by 8,000 jobs over the next ten years in the LEP area. This is likely to coincide with the need to replace significant numbers of workers who leave the sector. Estimates of new recruits needed, together with those leaving the Creative Economy in Lancashire are in the region of

1.2 million. These estimates, together with the dynamic nature of the sector mean that it is vital that skills enhancement can be achieved through employer or self-employed upskilling.

The nature of the businesses in Lancashire's Creative Industries, with over 90 per cent being micro businesses of less than 10 people (Table 3.5), exacerbates the challenge of up-skilling and employer-led skills enhancement. Indeed, the Creative Industries sector across the UK displays a rate of self -employment in 2015 at twice the rate (30 per cent) of the economy as a whole.

Consultees reported that there was an element of choice in remaining small, and around decisions and aspirations for company growth. For example, working with a pool of freelancers rather than employing staff directly and expanding in size of business. Brighton was given as an example of the notion of a 'freelance economy' resulting from lifestyle choices – **people choosing a place to live and working freelance in order to sustain that.** Small pockets of this were thought to exist across Lancashire.

The nature of the business base therefore presents an additional challenge for skills provision as it is well recognised that small companies have fewer resources to invest in work-placed learning, while the project-based and freelance nature of the sector means that employer–based training is constricted also by short-term contracts. Figures[36]show that just over half of employers will extend their work-based training to those on freelance or short-term contracts.

The three characteristics of the sector (rapid and dynamic change, diversity of skills needs and the nature of the business base) means that the skills-supply side and local economic development support initiatives need to adapt their traditional approaches if they are to meet the skills gaps; skills shortages and address the future provision for what is a growing and vital skills base not only for the Creative Industries themselves but also (especially in Lancashire) for other industries requiring creative and digital skills for their future growth prospects.

Co-Production of Skills

A number of examples where employers have worked flexibly to co-produce skills development have emerged in different sectors which can either be replicated in Lancashire or could be adapted from different industries to suit the needs of the Creative and Digital Industries. Three of these are highlighted below.

[36] Creative Skillset (2010) 2010 Creative Media Employer Survey. Creative Skillset, London.

NextGen Skills Academy

The **NextGen Skills Academy**, was set up last year to address an education gap in games, animation and VFX, has worked with employers in this sector to develop the new course after research found that 47 per cent of employers in these industries had vacancies that were hard to fill because they could not find applicants with the relevant skills.

Software and programming skills are currently required in the games, animation and visual effects industries. More than half of the jobs available in the games industry require coding and programming, as do 22 per cent of those in the VFX industry.

Software skills are also needed – with 64 per cent of jobs in the animation industry, 31 per cent of those in the games industry and 69 per cent of those in the VFX industry having vacancies in this area.

The new course, which will be worth three A-levels, starts in September 2015 at colleges across the UK. The course requires A-C grades in English and maths GCSE.

Shared Apprenticeships

Apprenticeships for the Creative and Digital sectors could be based on the model of the Shared Apprenticeship Scheme developed by the Construction Industry Training Board (CITB) which was successfully piloted in Lancashire. The Shared Apprenticeship Scheme allows apprentices to complete a full apprenticeship programme by working with a number of different employers, to gain the skill sets they require to become qualified.

The CITB scheme was set up to help employers who want to support the development of skills while working on regional contracts, but are not in a position to offer a full term apprenticeship, and who wish to support training the future workforce.

Getting involved in the Shared Apprenticeship Scheme allows employers to dip in and out of apprentice training. The Scheme allows an employer to take on an apprentice, for as short a duration as three months.

Once the apprentice has finished working with an employer they are found another placement, and upon framework completion, they will be assisted in sourcing permanent employment. An apprentice who completes the full three-year apprenticeship will pick up an NVQ Level 3 in their chosen trade. Currently, around 90 per cent of apprentices who complete the three years have secured full time employment in their chosen trade.

Trailblazers Apprenticeships

The Tech Partnership has been established by the technology industry to enable employers of all sizes to collaborate on increasing digital skills provision.

Their new Trailblazers Apprenticeship standards have been designed by employers, for employers. The new apprenticeship programmes, based on these standards, give employers the confidence that their apprentice will develop the skills they need. Two new standards are currently available and more are under development. Designed to better meet employers skills needs uptake is expected to be high.

In addition from our consultations it was clear that a range of different skills, beyond technical skills were required across the sector.

The nature of the sector and the expressed desire to learn informally or (learning by doing) suggests that the focus should be on self-directed and project-based learning underpinned by some taught business related material at Master's level. Some appetite and opportunity was identified in each of the local universities.

A good example of this is the coupling of project management, specifically tailored to the needs of service businesses, with design of the sales and service process around setting and delivering to client expectations. There are existing programmes which can be well positioned against this need such as "Innovation through Improved Service & Design" on which such an initiative might be based. (http://imagination.lancs.ac.uk/activities/Innovation_through_Improved_Service_Design)

Leadership development would be aimed specifically at the challenge of business scale-up and encouraging managers to lead and develop management teams rather than "simply" manage. There are existing programmes (such as LEAD to Innovate) which could be adapted. (http://www.lancaster.ac.uk/lums/business/businessgrowth/programmes/lead2innovate/)

5.3 Improving recruitment and retention through addressing the challenges and opportunities of the positioning of Lancashire

Consultees repeatedly referred to the "Manchester Effect" as a major barrier to the retention of skilled employees in Lancashire. This was of particular note in relation to the region's graduates who were attracted to cities such as Manchester and London.

Lack of specific infrastructure to support companies was described as a key factor hampering growth of businesses in Lancashire's Creative Economy in addition to any lack of skills. This was both hard and soft infrastructures. For example, there was no equivalent of places such as the Manchester-based Sharp Project. Poor broadband connectivity was also

felt to be a key barrier. Difficulties accessing finance, specifically venture capital and European funding programmes was noted, with a strong focus for the need to be able to "pitch" in London. The potential to develop a Creative Investment Fund to support graduate start-ups and / or entrepreneurs over 50, coming out of larger businesses was discussed as a potential locally-based initiative.

The emergence of the Northern Powerhouse agenda was felt to be an opportunity to create more links between Media City and other hubs outside of the immediate area and good practice mechanisms within the area needed to be shared and extended, such as:

- The Cumbria Incubator.
- The Artist's Hub in Blackpool.
- "Making Rooms" in Blackburn.

The need to create a 'Lancashire story', a 'magnet' to 'pull' people to the area, and to bring them back to the area was a strong theme. An initiative in the Lakes to attract staff to work in the area was suggested as a way to identify people who want the lifestyle that Lancashire offers and have the skills to meet local shortfalls.

Specific suggestions made by participants included:

- Better incentives for keeping businesses here.
- Improve the cultural capital e.g. open art house cinemas.
- Council officers and elected members to visit local businesses for improved understanding of achievements by local businesses and the hurdles they face.
- Improve links with universities, both for cooperative educational initiatives for mutual benefit and to overcome difficulties with retaining Lancashire graduates by creating direct recruitment relationships.

It was suggested that a catalyst was needed for growth and Digital Lancashire, a recently established Community Company, was described as an attempt to address this issue.

Examples of innovative schemes outside Lancashire were given as models for the sort of initiatives that could be looked at to drive change in Lancashire.

- Waterloo in Canada was described as having transformed how the local economy operates.
- The Bristol Enterprise Zone, specifically focused on the Creative Industries and technology, was regarded as a successful example.

- The Sharp Project in Manchester was described as an ‘amazing place’.

Other independent initiatives identified are worthy of note, e.g. Prolific North – a weekly newsletter offering news, informed opinion and features on creative and media companies in the North.

It was noted however that there was no discernible impact from Creative England (national provider of direct investment, ‘soft’ loans and business mentoring to UK’s Creative Industries).

6. Action Plan

Following extensive consultations and data analysis for the Creative Economy in Lancashire (includes creative and digital sectors) The Work Foundation recommends that Lancashire County Council Skills and Employment Board seek to establish a Sector Development Group for the creative and digital sectors. The immediate actions for such a Group would be to address three high-level objectives:

- Strengthening and deepening the local digital pipeline across all providers from schools to higher education;
- Revising the approaches to skills enhancement to ensure they are appropriate for the dynamic and micro-based businesses in the Lancashire Creative Economy;
- Working to improve recruitment and retention of appropriately skilled talent in Lancashire.

The outcome of these objectives can be advanced through actions focusing around the following specific actions as set out below.

Objectives	Actions	Lead &Partners	Performance Indicators	Framework Reference
Strengthening the Digital Pipeline	Exploring the establishment of a Digital Academy	Digital/ Creative Lancashire	Fewer reported vacancies/skills shortages in key LEP sectors (creative and digital)	FW(2a,2b)
	Improving Careers Information and Guidance in Schools	Lancashire Skills Hub/Schools/ Employers	As above	FW(2a,2b)
	Promoting positive Role Models to increase diversity across gender and other imbalanced recruitment.	Employers/ Skills Providers/Schools	As above	FW(1a,2b)
	Increase the provision of IT skills in FE and re-balance away from Creative Arts provision	Skills Providers/ Lancashire Skills Hub	As above	SWP(4a)
	Develop “shared apprenticeships” for smaller employers	Skills Providers/ HEIs/ Employers	Greater number of apprenticeships at L3 and above	FW (3a) SWP(1a)
	Strengthen the provision of HE in computer science and technical IT areas	HEIs in dialogue with Lancashire LEP	Fewer reported vacancies	FW(4a)
	Increase the retention of HE Graduates in Lancashire through increased work placements and internships	HEIs/ Employers	Greater number of graduates choosing to work in Lancashire	FW(4a)

Revising approaches to up-skilling and training in Creative and Digital	Undertake co-design of content and format of training	Skills providers / Employers	Fewer reported vacancies	FW(5a)
	Cross-training of CAIG and teachers	Lancashire County Council ??	Fewer reported skills shortages in providers	FW(2a,2b)
	Specialisation through a “clusters and networked” approach	Skills providers across the county working to collaborate on different provision rather than competing in same fields	More efficient skills provision	FW(7a)
	Provision of a Lancashire leadership and management programme for Tech SMEs	Lancashire HEIs	Higher number of companies with growth potential	SPW(5a)
Improving Recruitment and Retention of key skilled individuals	Positioning of Lancashire as a “creative environment”	Lancashire LEP	Greater number of graduates choosing to work in Lancashire	SPW(2a)
	Work with Employers to keep up to date on current and emerging shortages	Lancashire Skills and Employment Board and SDG	Fewer reported vacancies	IA (1a) FW(7a)

Annex A – Defining the Creative Economy

Creative Industries (Sectors)	
SIC	**Sector**
Advertising and marketing	
7021	Public relations and communications agencies
7311	Advertising agencies
7312	Media representation
Architecture	
7111	Architectural activities
Crafts	
3212	Manufacture of jewellery and related activities
Design	
7410	Specialised design agencies
Film, TV, radio and photography	
5911	Motion picture, video and television programme production activities
5912	Motion picture, video and television programme post-production
5913	Motion picture, video and television programme distribution
5914	Motion picture projection activities
6010	Radio broadcasting
6020	Television programming and broadcasting activities
7420	Photographic activities
IT, software and computer services	
5821	Publishing of computer games
5829	Other software publishing
6201	Computer programming activities
6202	Computer consultancy activities
Publishing	
5811	Book publishing
5812	Publishing of directories and mailing lists
5813	Publishing of newspapers
5814	Publishing of journals and periodicals
5819	Other publishing activities
7430	Translation and interpretation activities
Museums, galleries and libraries	
9101	Library and archive activities
9102	Museum activities
Music, performing and visual arts	
5920	Sound recording and music publishing activities
8552	Cultural education

Creative Economy (Occupations)	
SOC	**Occupation**
Advertising and marketing	
1132	Marketing and sales directors
1134	Advertising and public relations directors
2472	Public relations professionals
2473	Advertising accounts managers and creative directors
Architecture	
2431	Architects
2432	Town planning officers
2435	Chartered architectural technologists
3121	Architectural and town planning technicians
Crafts	
5211	Smiths and forge workers
5411	Weavers and knitters
5441	Glass and ceramics makers, decorators and finishers
5442	Furniture makers and other craft woodworkers
5449	Other skilled trades not elsewhere classified
Design	
3421	Graphic designers
3422	Product, clothing and related designers
Film, TV, radio and photography	
3416	Arts officers, producers and directors
3417	Photographers, audio-visual and broadcasting equipment operators
IT, software and computer services	
1136	Information technology and telecommunications directors
2135	IT business analysts, architects and systems designers
2136	Programmers and software development professionals
2137	Web design and development professionals
Publishing	
2471	Journalists, newspaper and periodical editors
3412	Authors, writers and translators
Museums, galleries and libraries	
2451	Librarians
2452	Archivists and curators
Music, performing and visual arts	
3411	Artists
3413	Actors, entertainers and presenters

9001	Performing arts
9002	Support activities to performing arts
9003	Artistic creation
9004	Operation of arts facilities

3414	Dancers and choreographers
3415	Musicians

Source: DCMS (2014) Creative Industries Economic Estimates January 2014

Acknowledgements

The Work Foundation transforms people's experience of work and the labour market through high quality applied research that empowers individuals and influences public policies and organisational practices. Through its rigorous research programmes targeting organisations, cities, regions and economies, The Work Foundation is a leading provider of research-based analysis, knowledge exchange and policy advice in the UK and beyond. Organisations from across all industry sectors can sign up as partners to gain access and active involvement in research, thinking and practice emerging from its work. The Work Foundation is part of Lancaster University – an alliance that enables both organisations to further enhance their impact.

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